This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

THIS PAGE BLANK (USPTO)

U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

SEARCH REQUEST FORM

SEATION TIE GOEST TOTAL (
Requestor's Name:		Serial Number:		
Date:	Phone:		Art Unit:	
Search Topic: Please write a detailed statement of search to that may have a special meaning. Give exam a copy of the sequence. You may include a	ples or relevant citations	s, authors keywords, etc	c., if known. For seque	. Define any terms nces, please attach
				·
	·			
		·		-
4				
				ľ
Date completed: 05-01-03	STAFF USE	CONLY (Vendors	
Searcher: Beverly &	4444	STIC	- Citation	IG Suite
Terminal time: 20		CM-1		STN Dialog
Elapsed time:		Pre-S		APS
CPU time: 23	Туре	of Search		Geninfo
Total time:	 · 	N.A. Sequence A.A. Sequence		SDC
Number of Searches:	 	A.A. Sequence Structure		DARC/Questel
Number of Databases:	· · · · · · · · · · · · · · · · · · ·	Bibliographic		Other CGN

USCOMM-DC 90-3952

THIS PAGE BLANK (USPTO)

us-09-918-026a-3.rge

```
April 30, 2003, 13:02:10 ; Search time 2934 Seconds (without alignments) 15563.157 Million cell updates/sec
                                                                                                                                                    4109280
GenCore version 5.1.4\_p5\_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                               2054640 segs, 14551402878 residues
                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                  nucleic search, using sw model
                                                                                                                                                                            IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_htg_hum:*
em_htg_inv:*
em_htg_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_htgo_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_htgo_hum:*
em_htgo_mus:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          em_htg_pln:*
em_htg_rod:*
em_htg_mam:*
                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_htg_vrt:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_htg_mus:*
                                                                                                                           US-09-918-026A-3
1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gb_ro:*
gb_sts:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_fun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_or:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_un:,
gb_v1:,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_vi:*
                                                                                                                                                                                                                                                                                                                                                                                gb_htg:
                                                                                                                                                                                                                                                                                                                                                                                                                     gb_ov:*
gb_pat:'
gb_ph:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pr:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_ph:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_sts
                                                                                                                                                                                                                                                                                                                                                                                             gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_ba:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_mu:
                                                                                                                                                                                                                                                                                                                                                                    gb_ba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gb_sy:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_in:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_om:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_pat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_un:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_p1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          em_ro:
                                                                                                                                                                                                                                                                                                                                                        GenEmbl:*
                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                               Minimum DB seq
Maximum DB seq
                                                                                                                                                                            Scoring table:
                                                  OM nucleic
                                                                                                                                                    seguence:
                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                       Database
                                                                          Run on:
```

Pred. No. is the number of results predicted by chance to have a

Bukany Saptem;

Bukany Saptem;

Bukany Saptem;

Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

I (bases 1 to 1569)

Chang, C.C., Sakashita, N., Ornvold, K., Lee, O., Chang, E.T., Dong, R.,

Lin, S., Lee, C.Y., Strom, S.C., Kashyap, R., Fung, J.J., Farese, R.V.

AF099031.2 GI:4878036

Homo sapiens. Homo sapiens

VERSION KEYWORDS SOURCE ORGANISM

ACCESSION

REFERENCE AUTHORS

AFU99031 11-SEP-2000 Homo sapiens acyl Co-A: cholesterol acyltransferase-2 (ACAT2) mRNA, complete cds. AB075946 Rattus no BC025931 Mus muscu AF078751 Mus muscu S81092 acyl-coenzy L42293 Mus musculu D86373 Rattus norv AF053336 Chloroceb L21934 Homo sapien AF354623 Pongo pyg AR053911 Sequence AR080270 Sequence 117129 Sequence 2 AF331507 Homo sapi AF332858 Homo sapi Continuation (4 of BC028940 Homo sapi AR053912 Sequence AR080271 Sequence II7130 Sequence 3 AF053337 Macaca fa Homo sapi Homo sapi AC073573 Homo sapi AC068888 Homo sapi U65393 Oryctolagus AC123791 Mus muscu AF331515 Homo sapi AC024216 Homo sapi AF099031 Homo sapi AF059203 Homo sapi U47320 Cricetulus AF354622 Gorilla g AC110347 Rattus no Drosophil Drosophil Drosophil Drosophil Sequence Sequence Drosophi. score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. Description ALIGNMENTS SUMMARIES F331502S13 F331502S06 AF332857S2 MUSACACT D86373 AF099031 AF059203 \$81092 10 DB 11:1 163811 11:0 74310 11:0 186322 11:0 242566 10:9 2102 10:9 176297 9:6 176 Length 919 157807 19371 Query Match Score LOCUS DEFINITION RESULT 1 AF099031 34 33 33 33 33 33 33 Result

```
/codon_start=1
/product="acy1 Co-A: cholesterol acyltransferase-2"
/product="acy1 Co-A: cholesterol acyltransferase-2"
/protein_id="AaCy335.2"
/db_xref="G1:4878037"
/translation="wBPGGARLINGAPEGLGGEREROPCGDGNTETHRAPDLVOWTRH
/translation="wBPGGARLINGAPEGLOSPEROPEPEGSLSRTOEPSIGKOK
WFITRKSLLDELMEVQMOPRETIYHMFIAGLCVFIISTLAIDFIDEGRLLLEFDLLIFSF
GGLPLALVWWPWPHELSTLLAPYGALRIMARGWEGNTQAGGGCALCALPWWV
AVBHGLPPASRCVLVFEOVRELMKSYSELREAVPGTLRARVEGGIQABSESSYLYFLF
CPTLIYRETYPTYPYVRMNYVAKNFAQALGCVLACFILGRLCVPVFANMSREPFSTR
ALVASILHATLPGIFMLLIFFFAHWULMPRAEMLRFGDRMFYRDWNSTSFSNYTR
TWNVVVHDMLXSYYVQGGRLLLGARRGVAMLGVFLVSAVAHEYIFCFYLGFFYPPWL
ILFLVIGGMLNFMMHDORTGPAMNVLMWTMLFLGGGIQVSLYCOEWYARRRCPLPQAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                in
                                                                                                                                                                                                                                                                                       Hanover,
               ACAT-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGGACTTGGTACAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGAGCCAGGCGGGGCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                         нв 7200,
                                                                                                                                                                                                                                                                                                                Sequence update by submitter
On May 20, 1999 this sequence version replaced gi:3892234
Location/Qualifiers
1. 1569
                                                                                                                                                                                                                                                                                        HB 7200,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1569;
                ACAT-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of cholesterol"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                           Dartmouth,
                                                                                                                                                                                                                                                                                          Dartmouth,
Jr., Patoiseau,J.F., Delhon,A. and Chang,T.Y. Immunological quantitation and localization of mann liver and small intestine Jr. Biol. Chem. 275 (36), 28083-28092 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 1569; DB 9;
100.0%; Pred. No. 1e-303;
tive 0; Mismatches 0;
                                                                                                                                                          (bases 1 to 1569)
Lee,O., Farese,R.V. Jr. and Chang,T.Y.
Direct Submitssion
Submitted (15-OCT-1998) Biochemistry,
NH 03755, USA
4 (bases 1 to 1569)
                                                                                                                                                                                                                                                     Lee,O., Farese,R.V. Jr. and Chang,T.Y. Direct Submission Submitted (20-MAY-1999) Biochemistry, NH 03755, USA
                                                                                                              and Chang, T.Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. 1569
/gene="ACAT2"
/function="esterification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="intestine"
1. .1569
                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                               sedneuce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       453
                                                                                          2 (bases 1 to 1569)
Lee,O., Farese,R.V. Jr.
Human ACAT-2 nucleotide
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FWGLVTPRSWSCHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="ACAT2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                 20428724
                                                                               10846185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Sim
Matches 1569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                             AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                            AUTHORS
                                                                                  PUBMED
                                                                                                 REFERENCE
                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                          REMARK
                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
```

```
1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GICCIGGGGIICIICIAICCCGICAIGCIGAIACICIICCIIGICAIIGGAGGAAIGIIG 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACTICAIGAIGCAIGACCAGCGCACCGGCCIGGCAIGGAACGIGCIGAIGIGGACCAIG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                               1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1080
                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                            1020
                                                                                                                                                                                                                                                                                                                                                                                         096
                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                             540
                                                                                                                                                                                    099
                                                                                                                                                                                                     099
                                                                                                                                                                                                                         720,
                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                900
                                                                                                                                                                  009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC
                                                                                                                                                                                                                                                           TTTGCCCAGGCCCTGGGATGTGTGCCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                           CCTGTCTTTGCCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC
                                                                       GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTCTGTCCACCCTGTTGGCG
                                                                                                                    661 GAGCATCAGCTCCCGCCGCCTCCCGTTGTGTCTTCTGGTCTTCGAGCAGGTTAGGTTCTG
                                                                                                                                                                                                                                                                                                GAGGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTACTTCCTCTTCTGCCCAACACTC
                                                                                                                                                                                                                                                                                                                                    ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                         TITGCCCAGGCCCTGGGATGTGTGTGTTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                             CGTACCAGGCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGGCGACGGCCTGGGC
                                                                                                                                                                                    TGIGCGCTTTTIAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                         GAGCATCAGCTCCCGCCTCCCGTTGTGTCTCCTGGTCTTCGAGCAGGTTAGGTTCCTG
CAGAAAGTTTTCATCCACCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC
          CCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCCACCTGGACGCAGGCGACGGGCCTGGGC
                                    CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCAGCACCCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1381
                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1321
                                                                                                                                                   541
                                                                                                                                                                                                                           661
                                                                         421
                                                                                           421
                                                                                                              481
                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                 781
                   301
                                     361
                                                       361
 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                     _
B
                                                                                                                                                                                                                                                                                                                                                                        δý
                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                             QΫ
                                                                                                                                                                                                       g
                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                   à
                                                                                           g
                                                                                                                               qq
                                                                                                                                                                   qq
                                                                                                                                                                                      οy
                                                                                                                                                                                                                           ò
                q
                                     Qγ
                                                      Dp
                                                                        δý
                                                                                                              Q
                                                                                                                                                   ŏλ
```

```
1081
     61
                                  112
                                                                  121
                                                                                                 172
                                                                                                                                                                                                                                                                                                 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1072
                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961
                              QQ
                                                                 δ
                                                                                            QQ
                                                                                                                                ò
                                                                                                                                                               g
                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                 δy
                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                           δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
/product="acyl coenzyme A:cholesterol acyltransferase 2"
/product="acyl coenzyme A:cholesterol acyltransferase 2"
/product="adx63998.1"
/broduct=1.1d="AAK63998.1"
/db_xref="G1:3746535"
/translation="MEDGRILLORTEGIGGEREROPCGDGNTETHRAPDLVQWTRH
MEAVKAQLLEQAQGQLRELLDRAMREAIQSYPSQDKPLPPPPPGSLSETHGEPSLGKQK
VFITRKSLLDELMEVQHFRTYTMPFAGLCVFTISTLIADFIDEGRLLLEADHUVCALPVHV
AVEHQLLAVWVPMPFLSTLLAPYQALRLWARGTWTQATGLGCALLAAHAVVLCALPVHV
AVEHQLPPASRCVLVFEQYNFLMKSYSFLREAVPGTLRARRGEGIQAPSFSSYLYFLF
CPTLIYRETYPRTYVRWNYVAKNFAQALGCVLXACFILGRLCVPVFANMSREPFSTR
ALVISILLATIPGEGIEMLLIFFAFLHCWLNAFAEMLREGORMEY REMNYSTRENYYR
ALVISILLATIPGEGIEMLTHER ANDMYSTREPFERR
                                                                                                                                                                                                                                                                                               2040 bp mRNA linear PRI 15-OCT-1998 coenzyme A:cholesterol acyltransferase 2 mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TWNVVVHDWLYSYVYQDGLRLLGARARGVAMLGVFLVSAVAHEYIFCFVLGFFYPVML
ILFLVIGGMLNPMMHDQRTGPAWNVLMWTMLFLGQGIQVSLYCQEWYARRHCPLPQAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sturley, S.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and Sturley, S.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 (bases 1 to 2040)
Oelkers,P., Cromley,D., Behari,A., Billheimer,J.T. and Sturley,S.I Direct Submission
Submitted (13-APR-1998) Human Nutrition, Columbia University, 630
W. 168th Street, New York, NY 10032, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2040)
Oelkers, P., Behari, A., Cromley, D., Billheimer, J.T. and Sturley, S.I Characterization of two human genes encoding acyl coenzyme A:cholesterol acyltransferase-related enzymes J. Biol. Chem. 273 (41), 26765-26771 (1998)
                                                 1500
                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ATGGAGCCAGGCGGGCCCGTCTGCGTCTGCAGAGGACAGAAGGCCTGGGAGGGGAGCGG 60
                                              Length 2040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1564.2; DB 9;
Pred. No. 8.9e-303;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  470 t

    2040
    /organism="Homo sapiens"
/db_xref="taxon:9606"
    /chromosome="12"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cell_type="hepatocyte"
52. .1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FWGLVTPRSWSCHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="ACAT2"
                                                                                                                                                                                                                                                                                                                                                               AF059203.1 GI:3746534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99.7%;
99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              604 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                 Homo sapiens complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                               CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                          AF059203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Sim
Matches 1566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                         1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                 1381
                                                                                                                                                                                                             1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                             AF059203
LOCUS
                                                                                                                                                                                                                                                        RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
               윱
                                              ò
                                                                             g
                                                                                                             à
                                                                                                                                            셤
                                                                                                                                                                             ò
                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTTTT 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CIGCAIGCCACGTIGCCAGGCATCTICAIGCIGCIGCICAICTITTTITTTCTICCICCAI 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1141 TGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGAC 1200
                                                                                                                   240
                                                                                                                                                                              300
                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                           351
                                                                                                                                                                                                                                                                                                                               471
                                                                                                                                                                                                                                                                                                                                                                                             531
                                                                                                                                                                                                                                                                                                                                                                                                                                                       591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           891
                            171
                                                                                      231
                                                                                                                                                 291
                                                                                                                                                                                                                                                                     411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       951
                                                                                                                 GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA
                                                                                                                                                                                                                                                     GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTGCCCAGGCCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                        TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG
                                                                      CAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC
                                                                                                                                                                                                                                                                                                   CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCAGCACCCTGGCC
                                                                                                                                                                                                                                                                                                                                                             421 ATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGGCGACGGGCCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   652 TGTGCGCTGCTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCATCAGCTCCCGCCGCCTCCCGTTGTGTCCTGGTCTTCGAGCAGGTTAGGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721 ATGAAAAGCTACTCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781 GAGGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTACTTCCTCTTCTTCTGCCCAACACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841 ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITECCCAGGCCCTGGGATGTGTGCTCATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
```

g

윤

a ò 8 ŏ g ò g ò g à

ö

```
Conservative
                                                                                                                                                                                              Similarity
                                                                                                                                                  ø
                                                                                                                                               408
                                                                                                                                                                                              Best Local Sim
Matches 1514;
                                                                                                                                                                                   Query Match
                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           694
                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                          320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                δy
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                          dd
                                                                                                                                                                                                                                                                                                                                                                                                                    δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                                              AF053234 2078 bp mRNA linear PRI 12-JUL-1999 Chlorocebus aethiops acyl-CoA:cholesterol acyltransferase 2 (ACAT2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae; Cercopithecinae; Cercopithecus.

( basea 1 to 2078)

Anderson, R. A., Joyce, C., Davis, M., Reagan, J. W., Clark, M., Shelness, G.S. and Rudel, L.L.
Identification of a form of acyl-CoA:cholesterol acyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Forest University inston-Salem, NC
                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                    1560
                                                                                                                                                                        1440
                                                                                                   1371
                                                                                                                                                                                              1491
                                                                                                                                                                                                                                             1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      edicine, Wake Forest Univer
Boulevard, Winston-Salem,
                                                                                                                         GTAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC
                                                                                                                                                                                    AACTTCATGATGCATGACCAGCGCACCGGCCTGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                     CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
                                                                              GTAGCCATGCTGGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC
                                  TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGCGCTCCTTGGTGCCCCGGGCCCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /EC_number="2.3.1.26"
/note="liver and intestine specific expression"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Davis, M., Reagan, J.W., Clark, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   specific to liver and intestine in nonhuman primates J. Biol. Chem. 273 (41), 26747-26754 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="synonym: Cercopithecus aethiops"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .2078
Organism="Cercopithecus aethiops"
/db_xref="taxon:9534"
/tissue_type="liver"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Medicine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (10-MAR-1998) Internal Me
School of Medicine, Medical Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 2078)
Anderson, R.A., Joyce, C., Di
Shelness, G. and Rudel, L.L.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="ACAT2"
80. .1660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="ACAT2"
                                                                                                                                                                                                                                                                                                                                                                                                                                             AF053234.1 GI:3582751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cercopithecus aethiops
Cercopithecus aethiops
                                                                                                                                                                                                                                                                                                                                                                                                                mRNA, complete cds. AF053234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2078
                                                                                                                                                                                                                                                                                                                    CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                               27157, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9756918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                              1492
                                                                                                                                                                                                                                                                                          1552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                1432
                                                                                                                                                                                                                                                                                                                                          1612
                                                                                                                                                                                                                                                                                                                    1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                       1312
                                                                                                                                                                                                                        1441
                                                                                                                                                                                                                                                                      1501
                                    1201
                                                          1252
                                                                                 1261
                                                                                                                                                                           1381
                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
               1192
                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
AF053234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
```

```
/product="acyl-CoA:cholesterol acyltransferase 2"
/protein_id="aAc62929.1"
/db_xref="G1:3882752"
/translation="WEPGEARLRLORTEGEGGEREHOPCRDGNTETHRAPDLVKWTRH
MEAVKAOLLEGAQGOLRELLDRAMFEAGLYFISTLADFIDERSLLGKOK
VFIIRKSLLDELMRYQHFRTTHMFAGGLYFISTLADFIDERSLLGKOK
VFIIRKSLLDELMRYQHFRTTHMFAGGLYFISTLADFIDERSLLLFFDLLIFSF
GQLPLALVTWYPMFLSTLAPYQALRLMARPGARGTWTLGAGLGCALLAHALVLCAL
PVHYAVEHQLPPASRCVLVFEQVRFLMKSYSFLREAVPGTLRARGEGIQAPSFSSYL
YFLECFTLIYRETYPPTTRWYVAKNFAGAALGCVLACFILGARGLYGTRANSREP
FSTRALVLSILHATLPGIRFMLLIFPAFLHCWLNARAEMLRFGDRMFYRDWNSTSFS
NY SRWMVVYHDWLYSYVYQDGLWLLGAQARGVAMLGVFLVSANAHEYIFCFVLGFFY
PVMILIELTVIGGALNFWMHDQHTGPAWNVLMWTMLFLGGGIQVSLYCQEWYARRHCPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTCTCCAGCTACCTCTACTTCCTCTTC 828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                           199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 259
                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGGCATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTTGTGTCTCCTGGTCTTCGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                            589 ACGGGCCTGGGGCTGTGCGCCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCTGCGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTCTGCCCCCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCAGCACCCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440 CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCACCACCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGACAGCTGCCATTGGCGCTGGTGACCTGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 CCGTACCAGGCCCTACGGCTGT------GGGCCAGGGGCACCTGGACGCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCGACTTCATTGATGAGGCCAGGCTGCTGCAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                                                                                                                                                                       1 ATGGAGCCAGGCGCGCGCCCTCTGCGTCTGCAGAGGGAAGGGCTGGGAGGGGAGCGG
                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                Length 2078;
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                      55;
                                                                                                                                                                                                                                                                                  Score 1459; DB 9;
Pred. No. 9.9e-282;
                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                  479
                                                                                                                                                                                                               POTTFWGLVTPRSWSCHT"
605 c 586 g
                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                   93.0%;
95.8%;
```

ï

S

Мау

Thu

g

g

ô

q ò

ô

g

g

ò

요

ò

ò a ò g

g

ò

g

ò

q

õ

g

ò

g

ò

g

ò

```
/codon_start=1
/product="AcylCoA:Cholesterol Acyltransferase 2"
/product="AcylCoA:Cholesterol Acyltransferase 2"
/product="AcylCoA:Cholesterol Acyltransferase 2"
/product="AcylCoA:Cholesterol Acyltransferase 2"
/protuct=1.130_330_3"
/translation="MEPKAPQLRRREROGEEOENGACGEGNTRTHRAPDLVOWTRHME
AVKTCCEGAOARELAELMDRAIWEAVOATRODREPETASDSTRKTOELHOFKRVF
ITRKSLLDELMEVOHFRITIHMFIAGLCCVLISTLAIDFIDERELAFSFGO
LPLALMMWAPNELSTILLLIPYOTURLARSYSGGAWTIGASLGCVLLAHAAAVLCVLPV
HVSYKHELPPASRCVLVFEOVRFLMKSYSFFRETVPGIFCVRGGKGTCTPSFSSYLYF
LFCPPLIT RETYPRYFREINWINYAKNPAQALCCLLYACFILGRLCVPVFANMSREPFS
TRALLLSILHATGFGIFMLLLIFFAFLHCWINARAEMLRFGDRAFYRDWMNSTSFSNY
YRTWNAVVHDWLSSYVYQDGLWLLGRGGGRGAAMLGVFLVSALVHEYIFCFVLGFFYPV
MILLELYUGGLLAFTFWNDRHTGPAWNILLMWTFLFLGGGIQVSLYCQEWYARRHCPLPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93
                                                              Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34 CTGCGGAGGAGGAAAGGCAGGGAGGAGCAGGAGAACGGAGCCTGTGGAGAAGGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88 ACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCTGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCCACCTCCCCCAGGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          268 TTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               148 GCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              508 TGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            568 A------GGGGCACCTGGACGCAGGGGGCCTGGGCTGTGCGCTTTTAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCAGAGGACAGAGGGCTGGGAGGGGAGCGGGAGCGCCAACCCTGTGGAGATGGAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTGTGTGTGTCTTCATCATCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          10; Length 1933;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                               Submitted (11-DEC-2001) Furnichi Yukio, Mie University,
Bioresources: Kamihama, Tsu, Mie prefecture 514-8507, J.
(E-mail:furnichi@bio.mie-u.ac.jp, Tel:81-59-231-9612,
Fax:81-59-231-9684)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8e-216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                 /organism="Rattus norvegicus"
/db_xref="taxon:10116"
13. 1587
                  and Takeshi,O.
                                                                                                                                                                                                                                                                                                                                                                                                            ų
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1129.6;
Pred. No. 7.86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                             444
                                                                                                          Location/Qualifiers
1. .1933
                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                             PTFWELVTPRSWSCHP"
                                                                                                                                                                                                                                                                                                                                                                                                            517
 2 (bases 1 to 1933)
Yukio, F., Katsunori, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 72.0%;
Best Local Similarity 83.5%;
Matches 1298; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            565 c
                                                                                                                                                                                                                                                                                                                                                                                                            407
                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                          CDS
                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROD 12-JUN-2002
transferase 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus mRNA for AcylCoA:Cholesterol Acyltransferase Complete cds.
AB075946.1 GI:21392391
                                                                                                                                                                                                                                                                                                 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1460 GGAGGAATGTTGAACTTCATGATGCATGACCAGCACGACGCCCGGCATGGAACGTGCTG 1519
                                                                                                                            1188
                                                                                                                                                                                                                                                                                                                                                                           GTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCC 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACGGCCCGGCATGGAACGTGCTG 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1520 ATGTGGACCATGCTGTTTCTGGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGG 1579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1580 TACGCACGCCGCACTACCCCCATACCCAGACCATCTGGGGGCTGGTGACACCTCGA 1639
                                                                                                                                                                          CCCCTCTGTGTTTCCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTG 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTGTCATT 1368
                919
                                                                                                            948
                                                                                                                                                                                                                                 TTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACCGCCACTTGGAACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCCCGAGGGGTAGCCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACGCACGCCGCACTGCCCCTTACCCCAGGCAACTTTCTGGGGGGCTGGTGACACCTCGA
                                                                                                          GTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGTGTCTATGCCTGCTTCATCCTGGGC
                                                                                                                                                                                                                                                                                                GCCTTCCTCCATGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTTGGAGACAGGATG
                                               TGCCCAACACTCATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Katsunori,M., Takeshi,O. and Yukio,F.
Cloning and sequence of rat intestinal ACAT2
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ಭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTTGGTCCTGCCATACCTAG 1660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTTGGTCCTGCCATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus cDNA
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
AB075946
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                       086
                                                                                                                                                                       949
                                                                                                                                                                                                      1040
                                                                                                                                                                                                                                                                                                                             1160
                                                                                                                                                                                                                                                                                                                                                           1129
                                                                                                                                                                                                                                                                                                                                                                                          1220
                                                                                                                                                                                                                                                                                                                                                                                                                       1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
              860
                                             829
                                                                                                          889
                                                                                                                                                                                                                                     1009
                                                                                                                                                                                                                                                                 1100
                                                                                                                                                                                                                                                                                                1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
```

ï

919

ð 셤 ò g δ 8 ò Q

```
/product="6imilar to sterol O-acyltransferase 2"
/product="6imilar to sterol O-acyltransferase 2"
/protein_id="AAH25931.1"
/db xref="ci:19684142"
/translation="MOPKVPQIRREGIGEEQEKGARGGGGNARTHGTPDLVQWTRHM
EAVRTOFLEQAQRELAELLDRALWEAMQAYPKQDRPLPSAAPDSTSKTQELHPGKRKV
PITRKSLIDELMEVQHFRIIYHMFIAGLCVIIITAIDFIDEGRAMLEFEDFLLEFSFG
QIDLALMYWPWRESTLLAPYQTLWMARPRAGGAWMLGASLGCVLLAAHAVVLCVLP
VHVSVHHELPPASRCVLVFEQVELMKSYSFLRETVPGIFCVRGGKGISPPSFSSYLY
PLECPTLIYRETYPRETSITRWNVAKNFAQVLGCLLYACFILGRLCVPVFANMSREPF
STRALLLSILHATGPGIFMLLLIFFFREHCWINAPRAMLERGORMEYSFSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YYRTWNVVVHDWLYSYVYQDGLWLLGRRARGVAMLGVFLVSAVVHEYIFCFVLGFFYP
VMLMLFLVFGGLLNFTMNDRHTGPAMNILMWTFLFMGQGIQVSLYCQEWYARRHCPLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Info@bogsc.bc.c.
Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,
Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,
Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
Letticia Hsiao, Marrin Krzywinski, Reta Kutsche, Oliver Lee, Soo
Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven
Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline
Schelin, Duane Smallus, Michael Smith, Lorraine Spence, Jaff Stott,
Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
George Yang, Scott Zuyderduyn, Marco Marra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clone distribution: MGC clone distribution information can be foun through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov Series: IRAK Plate: 57 Row: f Column: 19 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 6755597. Location/Qualifiers
                                   Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                     Submitted (18-MAR-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGGGAGCGCCAACCCTGT---GGAGATGGA
                                                                                                                                                                                                                                                                                  Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
                                                                                                                                                                                                                                                           NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1115; DB 10;
Pred. No. 6.5e-213;
0; Mismatches 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="MGC:36039 IMAGE:5099063"
/tissue_type="Liver, normal. 5 m
                                                                                                                                                                                                                                                                                                                                                                                                                              BC Cancer Agency, Vancouver, BC, Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="Liver, normal./clone_lib="NCI_CGAP_Li9"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/db_xref="taxon:10090"
                                      Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
1 (bases 1 to 2170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            585 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QTTFWGMVTPRSWSCHP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /map="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71.1%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 71.1'
Best Local Similarity 83.3'
Matches 1297; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .2170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         609
                                                                                                                                           Direct Submission
                                                                                                                  Strausberg, R.
                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                    ORGANISM
                                                                                                               AUTHORS
TITLE
JOURNAL
                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                   REMARK
                                                                                                                                                                                                                                                                                       COMMENT
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1354 TACCCGGTCATGCTGATCCTCTTTCTTGTGGTTGGAGGTCTGCTGAACTTCACCATGAAC 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCC 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1174 TCCTTCTCCAACTATTACCGCACCTGGAACGCGGTGGTCCATGACTGGCTGTACAGCTAC 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GIGIAICAGGAIGGGCIGCGGCICCTIGGIGCCCGGGCCCGAGGGGIAGCCAIGCIGGGI 1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTG 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGGCATCTTCATGCTGCTGCTCTTTTTTTTTCTTTCCTCCATTGCTGGCTCAACGCC 1095
                                                                                                                                                                                                                                                                                                                                                                                        915
                                                693
                                                                                              735
                                                                                                                                           753
                                                                                                                                                                                            795
                                                                                                                                                                                                                                            813
                                                                                                                                                                                                                                                                                          855
                                                                                                                                                                                                                                                                                                                                       873
                                                                                                                                                                                                                                                                                                                                                                                                                                        933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus, Similar to sterol O-acyltransferase 2, clone MGC:36039 IMAGE:5099063, mRNA, complete cds. BC025931 GI:19684141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTGCCGAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14.74 GGCATCCAGGTCAGCCTATACTGCCAGGAGTGGTACGCTCGGCGCACACTGTCCCCTTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCCAGGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCACGCCGTGGTGTTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCG
                                                                                              676 CCGGCCTCCCGTTGTGTCCTGGTCTTCGAGCTTAGGTTCCTGATGAAAAGCTACTCC
                                                                                                                                                                                            TTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC
                                                                                                                                                                                                                                                                                            CCCAGITICICCAGCIACCICIACITCCTCTICIGCCCAACACICATCIACAGGAGACI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGCAACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG 1569
```

found

month old male mouse."

5

Gaps 84

15;

Length 2170; Indels

200 144

141

q

DEFINITION

LOCUS

RESULT 5 BC025931

ACCESSION

VERSION KEYWORDS

1336

1276

1234

1216

g δy g ò g ŏ g à a ò

1036 1054 1096 1114 1156

δ

g

q ò

ŏ

g

814 928

964

38

916 934 916 994

ð

g ð

g

οy

1456

1396

1534

q

1516

Ωp

```
AACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATCCTGCATGCCACG 1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCA 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            912
                                                                                                                                                                                                     504
                                                                                                                                                                                                                          560
                                                                                                                                                                                                                                                                620
                                                                                                                                                                                                                                                                                      612
                                                                                                                                                                                                                                                                                                          680
                                                                                                                                                                                                                                                                                                                                                                                       800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               980
                                       264
                                                  261 TGGGAGGCTATGCAAGCTTACCCCAAACAAGACACCTCTTCCCTCCGCGGCGCCCCAGAT 320
                                                                                       384
                                                                                                                                 444
                                                                                                                                                                                  500
                                                                                                                                                                                                                                              564
                                                                                                                                                                                                                                                                                                                            672
                                                                                                                                                                                                                                                                                                                                                                    CCGCCGCCTCCCGTTGTGTCCTGGTCTTCGAGCAGGTTAGGTTCCTGATGAAAAGCTAC 732
                                                                               TCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAGTTTTCATCATCCGCAAG 324
                                                                                                                                                                                                                                                                                     ---6GGGCACCTGGACGCGACGGGCCTGGGCTGTGCTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1101 GGGCCAGGCATCTTCATGCTGCTCCTCATCTTCGCCTTCCTGCACTGCTGGCTCAAC
                                                                                                                                                                         GCCAGGCCGCGCGCGCGGGGGGCCTGGATGCTGGGGGCCCAGCCTGGGCTGCGTTCTGCTG
                                                                                                                                                                                                                                                                                                                           GCCGCCCACGCCGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTC
                                                                                                                                                                                                                                                                                                                                                                              GCCCCCAGTTTCTCCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1041 AACATGAGCCGGGAACCCTTCAGCACCCGGGCTCTGCTGCTCTCCATCTTGCATGCCACG
          ACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGG
                                                                                                                                                                                                                                                        1033 TTGCCAGGCATCTTCATGCTGCTGCTCTTCTTTGCCTTCCTCCATTGCTGGCTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGC
AAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATG
                                                                                                                      TCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTCCGCACCATCTACCACATGTTCATC
                                                                                                                                                                                                     CTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTG
                                       CGGGAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCCACCTCCCCCAGGT
                                                                                                                                                             GCTGGCCTGTGTGTCTTCATCACCACCCTGGCCATCGACTTCATTGATGAGGGCAGG
                                                                                                                                                                                                                                                                                     GCCA-----
                  201
                                                                                                                                         381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1153
145
                                                                              265
                                                                                                  321
                                                                                                                     325
                                                                                                                                                                                                     445
                                                                                                                                                                                                                                                                561
                                                                                                                                                                                                                                                                                                        621
                                                                                                                                                                                                                                                                                                                            613
                                                                                                                                                                                                                                                                                                                                                                   673
                                                                                                                                                                                                                                                                                                                                                                                      741
                                                                                                                                                                                                                                                                                                                                                                                                                                                  793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1221
                                                                                                                                                              382
                                                                                                                                                                                 441
                                                                                                                                                                                                                         501
                                                                                                                                                                                                                                             505
                                                                                                                                                                                                                                                                                     565
                                                                                                                                                                                                                                                                                                                                               681
                                                                                              ţ,
                                                                                               g
                                                                                                                                        g
                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
ò
                  g
                                                      g
                                                                             à
                                                                                                                    à
                                                                                                                                                             õ
                                                                                                                                                                               g
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                      ò
```

```
/product="acyl coenzyme A:cholesterol acyltransferase-2"
/protein_id="AAC64057.1"
/protein_id="AAC64057.1"
/protein_id="AAC64057.1"
/protein_id="AAC64057.1"
/translation="MORYUPOLREREGIGEEOEKGARGGEGNARTHGTPDLVOWTRHM
EAVKTOFLEGAQRELAELLDRALWEAMQAYPKODRPLPSAAPDSTSKTPELRPGKRKV
VARKSLIDELAEVQHRRTIYHMFIAGLWFLISTAIDFIDEGRALMLEFDLLEFSFG
OLPLALMTWVPMFIXTLLYNYOTLWLWARPRAGGAWMLGASLGCVLLAAHAVVLCVLP
VHVSVRHELPPAASRCYLVFEGVRLLMKSYSFIRETVPGIFCVRRGGGISPPSFSSYLY
FLECPTLIYRETYPRTPSIRWNYAKNFAQVLGCLLYACFILGRLCVPVFANMSREPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF078751 1607 bp mRNA linear ROD 15-OCT-1998 Mus musculus acyl coenzyme A:cholesterol acyltransferase-2 (Acact-2) mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     San
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomı;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus.

Mus musculus.

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi

Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus

Mases 1 to 1607)

Mases 1 to 1607)

Medses, S., Novak, S., Zheng, Y. W., Myers, H. M., Lear, S. R., Sande, E.,

Welch, C. B., Lusis, A. J., Spencer, T. A., Krause, B. R., Erickson, S. K.

and Farese, R. V. Jr.

ACAT-2, a second mammallan acyl-CoA:cholesterol acyltransferase.

Its cloning, expression, and characterization

J. Biol. Chem. 273 (41), 26755-26764 (1998)
                                    1340
                                                                                                            1400
                                                                                                                                                                                         1460
                                                                                                                                                                                                                               1452
                                                                                                                                                                                                                                                                      1520
                                                                                                                                                                                                                                                                                                        1213 TACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTG 1272
                                                                                                                                                   TICTATCCCGTCATGCTGATACTCTTCTTGTCATTGGAGGAATGTTGAACTTCATGATG 1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Street,
                                                                                                                                                                                                                                                                                                                                                                                                       1401 TTCTACCCGGTCATGCTGATGCTATTCCTTTTTCGGGGGGCTGCTGAATTTCACCATG
                                                                                                                                                                                                                                                    GGTGTGTTCCTGGTTCTCCGCAGTGCCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTC
                                                                                              CATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC
                                                                                                                                                                                                                                                                                                                                                                                     CCCCAGGCAACTTTCTGGGGGGTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23rd (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gladstone Institute, 2550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D15Mit16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /map="between Pou6f1 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /strain="C57BL/6"
/db_xref="taxon:10090"
/chromosome="15"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (16-JUL-1998) Glads
Francisco, CA 94110, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="Acact-2"
30. .1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="Acact-2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="ACAT-2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF078751.1 GI:3746693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 1607)
Farese, R.V. Jr.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF078751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9756919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                   1333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                          1273
                                                                                                                                                                                                                                                                                                                                                                                       1513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                           1581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6.
AF078751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                qq
                                                                                                          q
                                                                                                                                                                                     g
                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                          ò
                                                                                                                                                 δý
                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                        ò
```

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE
PUBMED
REMARK
                                                                                                                                                                                                                                                                                                                                                        1453
                                                                                                                                                                                                                                                                                                                                                                                                1513
                                                                                                                                                                                                                                                                                                                                                                                                                    1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                              1153
                                                                                                                                                                  1191
                                                                                                                                                                                                                              1273
                                                                                                                                                                                                                                                                       1333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
 951
                                         1011
                                                              1033
                                                                                   1071
                                                                                                       1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                    973
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
S81092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                        qq
                                                                                                                         a
                                                                                                                                                                 Q
                                                                                                                                                                                                         Op
                                                                                                                                                                                                                              δy
                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                  q
                                                                                                       ŏ
                                                                                                                                              δý
                                                                                                                                                                                        à
                    Ω
                                                              Qγ
STRALLLSILHATGPGIFMLLLIFFAFLHCWLNAFAEMLRFGDRMFYRDWWNSTSFSN
YRTWNWYNDWLYSYYQDGIWLLGRRARGYAMLGYPELVSAVVHEYIFCFVLGFFYP
YMLMLFLYFGGLLWRMDRHTGPAWNILMWTFLFWGGGIQVSLYCQEWYARRHCPLP
QTTFWGWVTPQSWSCHT"
                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   890
                                                                                                                                                                                                                                                                                                                                    470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTGGCCGTGGAGCATCAGCTC 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGCCGGCCTCCCGTTGTGTCTTGGTCTTCGAGCAGGTTAGGTTCCTGATGAAAAGCTAC 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     792
                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                             290
                                                                                                                                                                                                                                                                                                     350
                                                                                                                                                                                                                                                                                                                                                                                                                                                    564
                                                                                                                                                                                                  204
                                                                                                                                                                                                                                                                                 324
                                                                                                                                                                                                                                                                                                                         384
                                                                                                                           144
                                                                                                                  84
                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTTCCTGAGAGAGACTGTGCCTGGGATCTTTGTGTCAGACGAGGGAAAGGGCATCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCC
                                                                                                                                                                    GCCA--------GGGGCACCTGGACGCGACGCGACGCCTGGGCCTGTGTTTA
                                                                                                                                                          AACACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCTGTG
                                                                                                                                                                                                 AAGGCACAATTGCTGGAGCAAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATG
                                                                                                                                                                                                                                         CGGGAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCACCTCCCCAGGT
                                                                                                                                                                                                                                                             TGGGAGGCTATGCAAGCTTACCCCAAACAAGACAGACCTCTTCCCTCCGCTGCCCCAGAT
                                                                                                                                                                                                                                                                                  TCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAG
                                                                                                                                                                                                                                                                                                                          TCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTCCGCACCATCTACCACATGTTCATC
                                                                                                                                                                                                                                                                                                                                                                   GCTGGCCTGTGTGTTCTTCATCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                             CTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTG
                                                                                                                CTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGGGAGCGCCAACCCTGT---GGAGATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGGGTGCCCATGTTCTGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGG
                                                                          Length 1607
                                                                                              15;
                                                                                              Indels
                                                                          DB 10;
                                                                                              247;
                                                                        Score 1112.4; DB 10
Pred. No. 2.2e-212;
0; Mismatches 247;
                                          4
                                          385
                                           456 g
                                                                         Query Match
Best Local Similarity 83.2%;
Matches 1295; Conservative
                                           466 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     831
                                            COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  913
                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                                                                                                     385
                                                                                                                                                                                                                                                                                                                                                                                                              445
                                                                                                                                                                                                                                                                                                                                                                                                                                 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              565
                                                                                                                    28
                                                                                                                                        21
                                                                                                                                                           85
                                                                                                                                                                               111
                                                                                                                                                                                                    145
                                                                                                                                                                                                                      171
                                                                                                                                                                                                                                           202
                                                                                                                                                                                                                                                                                   592
                                                                                                                                                                                                                                                                                                       291
                                                                                                                                                                                                                                                                                                                           325
                                                                                                                                                                                                                                                                                                                                                                                          11
                                           BASE CO
ORIGIN
```

g

g

ò

ö g g ò

ð

g δ g ò g ò g

Ľ,

à

ŏ g qq ŏ q õ g ò g δ g ò

ò

QQ

ò

```
03-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="acyl-coenzyme A:cholesterol acyltransferase, ACAT"
146. .1768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 οŧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                       1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1430
                                                                                                                                                                                             1152
                                                                                                                                                                                                                                    1190
                                                                                                                                                                                                                                                                                                              1250
                                                                                                                                                                                                                                                                                                                                                  1272
                                                                                                                                                                                                                                                                                                                                                                                       1310
                                                                                                                                                                                                                                                                                                                                                                                                                              1332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1490
                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATG 1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCCACTGCCCCTTA 1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse homologue
ferase and its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenBank staff at the National Library of Medicine created thi
entry [NCBI gibbsq 175976] from the original journal article.
This sequence comes from Fig. 3A.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peritoneal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCCAGGCAACTTCTGGGGGCTCGTGACACCTCGATCTTGGTCCTGCCATAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1491 CAGGCATCCAGGTCAGCCTATACTGCCAGGAGTGGTATGCTCGTCGACACTGTCCCCTG
                                                                                                                  1393 CATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CIGGGCTGTTTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTCCTGTCTTTGCC
                                    1131 GCCTTCGCCGAGATGCTGCGGTTTGGAGATGTTCTACCGGGACTGTGGAACTCG
                                                                                                                                                                                               GCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCA
                                                                                                                                                                                                                                                                           ACGICCTICICCAACIACTACCGCACTIGGAACGIGGIGGICCAIGACIGGCTGIACAGC
                                                                                                                                                                                                                                                                                             GGTGTGCTCCTCCCCCAGTGCCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; M 1 (Dases 1 to 3041) Green, S. Steinberg, D. and Quehenberger, O. Cloning and expression in Xenopus cocytes of a mouse he human acylcoenzyme A: cholseterol acyltransferase potential role in metabolism of oxidized LDL Biochem. Biophys. Res. Commun. 218 (3), 924-929 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3041 bp mRNA linear acyl-coenzyme A:cholesterol acyltransferase [mice, macrophages, mRNA, 3041 nt].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.3041
/organism="Mus sp."
/db_xref="taxon:10095"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus sp. peritoneal macrophages Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:1478335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S81092
S81092.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biochem. F
96158986
8579615
```

Þ

```
1176 AGGAGCCCTTCAGTGCTCGTGTCCTGGTGTGTGTTTTAACTCCATCTTGCCAGGTG 1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="ACACT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L42293.1 GI:1066809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .3697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .3697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MUSACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L42293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5'UTR
                                             1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1523
                                                                                                                                  1103
                                                                                                                                                                                                                          1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
MUSACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
  පු
                                          ò
                                                                                  QQ
                                                                                                                                    ò
                                                                                                                                                                          QQ
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                           /product="acyl-coenzyme A:cholesterol acyltransferase"
/product="acyl-coenzyme A:cholesterol acyltransferase"
/product="acyl-coenzyme A:cholesterol acyltransferase"
/do_xref="G1:147836"
/do_xref="G1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
  acyltransferase, ACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             983 GAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGCA 1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        863 GGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCCAGGCCCTGGGATGTG 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              347 AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                696 CTACACTGTCAATCCCCTATTTCCTGTTCCAGCGATGGGCCCACGGTTACAGCAAGAGTT 755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              749 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCCAGTT 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      936 ATATCCCACGAGTACTAAATGCAGCCAAGGAGAAATCAAGCAAAGATCCACACTACCCACAG 995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              287 CATCCCTGGGGAAACAGAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 816 TICTAGGITTIGIGCCAACATACGITGICTTAGCATACACACTGCCACCAGCCICCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTCCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               636 TGGCCTATGCTTTTGGCAAATTTCCTACTGTTATTTGGACATGGTGGGCCATGTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                          Score 421.4; DB 10; Length 3041; Pred. No. 3.6e-74; 0; Mismatches 506; Indels 24;
/gene="acyl-coenzyme A:cholesterol acyltransfer
/note="This sequence comes from Fig. 3A; ACAT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match 26.9%;
Best Local Similarity 59.2%;
Matches 769; Conservative
                                                                                                                                                                                                                                                                                                                                                            718
                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
Chan, L.
Tissue-specific expression and cholesterol regulation of
Tissue-specific expression and cholesterol in mice.
acylcoenzyme A:cholesterol acyltransferase (ACAT) in mice.
Molecular cloning of mouse ACAT CDNA, chromosomal localization, and
regulation of ACAT in vivo and in vitro
J. Biol. Chem. 270 (44), 26192-26201 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ROD 21-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACACT 3697 bp mRNA linear ROD 21-NOV-1' musculus acyl-coenzyme A:cholesterol acyltransferase (ACACT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1462
                                                                                                                       1162
                                                                                                                                                                                                                                                                                                      1415
                                                                                                                                                                                                                                                                                                                                                                                                                                 1475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1595
                                                                                                                                                                                                                                               CCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATC 1222
                                                                                                                                                                                                                                                                                                                                                                    1223 AGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCC 1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1596 GGAAAAGGCCAATCTGGAACATCATGGTTTGGGCTTCTCTGTTCCTGGGCTATGGACTCA 1655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1656 TTCTGTGCTTTTATTCTCAAGAGTGGTATGCCCGCCAGCACCTGTCTGAAGAACCCTA 1715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acyl-coenzyme A:cholesterol acyltransferase.
Mus musculus CDNA to mRNA.
Mus musculus CDNA to mRNA.
Bukarnyota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae,
1 (bases 1 to 3697)
Uelmen, P.J., Oka,K., Sullivan,M., Chang,C.C., Chang,T.Y. and
                                                                                                                                                                                                                                                                               TCTTCATGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCG
                                                             1336 TCTTGATACTGTTCCTTTCGTTCTTTGCCTTTTTGCACTGCTGGCTCAATGCCTTTGCTG
                                                                                                                                                    1416 AAGACCTGCTCTGGTTTTTCTCGAAGAGGTTCAAATCTGCCGCCATGCTGGCGGTCTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1283 TGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1343 TCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1536 TGCTCTTCGTGCTCTTCATGTTCTTTGGAATGGCTTTTAACTTCATTGTTAACGACAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACCGGCCCGGCATGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1463 AGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCAA
                                                                                                                           AGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1716 CATTTCTGGATTATGTCCGGCGGGACCTGGACTTGTC 1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCC 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="(vector lambda zAPII)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus'
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
1. .3697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /map="chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="ACACT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="ACACT"
```

1042

1162 2019

```
Rattus norvegicus mRNA for acyl-coenzyme A:cholesterol acyltransferase, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matsuda,H., Hakamata,H., Kawasaki,T., Sakashita,N., Miyazaki,A., Takahashi,K., Shichiri,M. and Horiuchi,S. Molecular cloning, functional expression and tissue distribution of rat acyl-coenzyme A:cholesterol acyltransferase Biochim. Biophys. Acta 1391 (2), 193-203 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D86373.1 GI:3036904 acyltransferase. acyl-coenzyme A:cholesterol acyltransferase. Rattus norvegicus (strain:Wistar) male adrenal grand cDNA to mRNA. Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                   2320 TICTGTGCTTTTATTCTCAAGAGTGGTATGCCCGCCAGCACCATGTCTCTGAAGAACCCTA 2379
                                                    1720 GGACTCCTACTGTAAGATGGGGGTTATGTCGCTATGCAGTTTTTACAGGTGTTTGGCTGC 1779
                                                                                                                                                                                                                    1840 AGGAGCCCTTCAGTGCTCGTGTCCTGGTCCTGTGTGTGTTTTAACTCCATCTTGCCAGGTG 1899
                                                                                                                                                                                                                                                       1043 TCTTCATGCTGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCG 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1283 TGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1140 CCCTGTCGGCTGTGGTGCACGAGTATGCCCTCGCCATCTGCCTGAGTTACTTCTACCCGG
                                                                                                                                                                            983 GAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGCA
                                                                                                                                                                                                                                                                                 1900 TCTTGATACTGTTCCTTTCGTTCTTTTGCCCTGCTGCTGGCTCATGCCTTTGCTG
                                                                                                                                                                                                                                                                                                                                         1103 AGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAGCTCAACGTCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGCTAGCCATGCTGGTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1343 TCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2200 TGCTCTTCGTGCTCTTCATGTTCTTTGGAATGGCTTTTAACCTTCATTGTTAACGACAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1403 GCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1463 AGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCAA
                                                                                                                                                                                                                                                                                                                                                              GGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTG
                                                                                                TGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1523 CTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCC 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 1750)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Horiuchi, S.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98223432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
MEDLINE
                  863
                                                                                              923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
D86373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                        g
                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                  q
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                         δy
                     δy
                                                                                                                                                                              Qγ
                                                                                                                                                                          /Codon_start=1
/product="acyl-coenzyme A: cholesterol acyltransferase"
/product="acyl-coenzyme A: cholesterol acyltransferase"
/protein_id="aAc42075.1"
/db_xxef="01:1066810"
/translation="MSLENBLESKSENPEQDEAQKNEMDTYRNGHITMKQLIAKKRLL
RAPAEGCKIFTSKQSLLDELFEVDHIRTIYHMFIALLILFVLSTIVVDYIDEGRIVLE
FNLLAYAFGREPTVYNTHWAMFLSTLSIPFELFQPAAHGYSKSSHPLIYSIVHGLLET
SKDPLFTVNOYLYFERAPTLIYEDITLEGOTTHIMAGNERS
SKDPLFTVNOYLYFERAPTLIYEDITEQPAAHGYSVRANGFECHET
CAPLERNIKQEPFSARVLVLCVFNSILLPGVLILFLSFFAFLHCWLNAFAEKS
                                                                                                                                                                                                                                                                                                                                                                                                  FYKDWWNST.SYSNYYRTWNVVVHDMLYYYVYKDLLWFFSKRFKSAAMLAVFALSAVVH
EYALAICLSYFYPVLFVLFWFFGMAFNFIVNDSRKRPIWNIMVWASLFLGYGLILCFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                        aa 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1480 TTCTAGGTTTTGTGCCAACATACGTTGTCTTAGCATACACACTGCCACCACCACCACCCGCT 1539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTCCAGAACAAGGGAAGATTTTTATTTCAAGGCAGTCTCTTTTAGACGAGCTGTTTG 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTT 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGIGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTCCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTA 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1420 CTCACCCATTGATCTATTCCCTTGTCCATGGCTTGCTCTTTAGTCTTTCAACTTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1600 ATATCCCACGAGTACTAAATGCAGCCAAGGAGAAATCAAGCAAAGATCCACTACCCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGCACCCTGGCCATCGACTTCATTGATGAGGCCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----CACCTGGACGCAGGCGACGGGCCTGGGCTGTGCGCCTTTTAGCCGCCCACGCCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGGCCAGGGG-------
                                                                                                                                    /note="amino acid feature: N-glycosylation site, amino acid feature: N-glycosylation site, am 481"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10; Length 3697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 421.4; DB 10;
Pred. No. 3.5e-74;
0; Mismatches 506;
                                                                                                                                                                                                                                                                                                                                                                                                                                        SQEWYARQHCPLKNPTFLDYVRPRTWTCRYVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ų
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             804
753. .760
/gene="ACACT"
761. .>1016
/gene="ACACT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="ACACT"
3697
                                                                                                               /gene="ACACT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="ACACT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               2433. .3696
                                                                                                .2432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             812 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Simi
Matches 769;
  TATA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          467
                                          exon
                                                                                                  CDS
```

ò a ŏ

8

g

셤 ò

ŏ

g

g δ

g ò g δ

ò

g

a

ò

ò

1462

1402

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                              1103
                                                                                                                                                                                                                                                         1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                     1163
                                                                                                                                                                                                                                                                                                                                           1223
                                                                                                                                                                                                                                                                                                                                                                                                                             1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1677
    863
                                                         923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AF053336
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
    δ
                             g
                                                          ò
                                                                                   g
                                                                                                               ò
                                                                                                                                        οp
                                                                                                                                                                       οy
                                                                                                                                                                                             Q
                                                                                                                                                                                                                             οý
                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                              /protein_id="BaA25372.1"
/db_xref="G1:3036905".
//tb_xref="G1:3036905".
//tb_xref="G1:3036905".
//translation="MYGETSLRNRLSRSAENPEQDEAOKNLLDTHRNGHITMKQLIA
//translation="MYGETSLRNRLSRSAENPEQDEAOKNLLDTHRNGHITMKQLIA
//translation="MYGETSLRNLSRSAENPEQDEAOKNLLDTRSILEEWKNNH
RAKDLRAPPEQGKIFISRRSLLDELFEVDHIRTIYHMFTALLIIFILSTLYDDEG
                                                                                                                                                                                                                                                                   RLVLEFSLLAYAFGQFPIVIWTWMAMFLSTLAIPYFLFQRWAHGYSKSSHPLIYSLIM
AREFLVFOLGIGGFPYVLAYTLPPASRFLILILGOIRLWKHAHSYTRENVPRVLSA
AREKSSTVPNPTVNOYLYFLAPALYTRDSYBRTPTVWRAHSYTRANGFLOYFGCLFYVYS
IFERLCAPLFRNIKQEPFSARVLVLCVFNSILDGVLMLFLSFFAFLHCMLNAFEMLR
FGRMFYKMWNSTSYSNYFWWLVYHDWLYYYYKDLLWFFSKRFRFAAMLAVFAL
SADVHBYALANCLSYFYPVLFWFFGMAFRIVNDSRKRPWMNIMVRASLFLGHGV
ILCFYSGEWARQCRCHKNPFLLDYNRRPTWTCRYVF
                                                                                                                                                                                                                                                                                                                                                                                                                                          ñ
    Kumamoto University School
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Honjo 2-2-1, Kumamoto,
                                                                                                                                                                                    A:cholesterol acyltransferase"
Submitted (04-JUL-1996) Selkoh Horiuchi, Kumamoto University Sc
of Medicine, Department of Biochemistry; Honjo 2-2-1, Kumamoto,
Kumamoto 860-0811, Japan (E-mail:horiuchi@gpo.kumamoto-u.ac.jp,
Tel:81-96-373-5068, Fax:81-96-364-6940)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGGCCTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGG 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCACCCACTCATCTATTCCCTTATCCATGGCGCATTCTTCTTGGTCTTTCAACTTGGAA 776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    926
                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCCAGCTACCTCCTTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGACGGCCTGGGCTGTGCGCTT-------TTAGCCGCCCACGCCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGA-----TCCAGGCCCCCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGTGCCACGAGTTCTAAGTGCAGCCAAGGAGAAATCGAGCACGGTTCCAGTACCCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTACACTGGCAATCCCCTATTTCCTGTTCCAGCGTTGGGCCCATGGTTACAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      777 TCCTCGGTTTTATACCAACATATGTTGTTGTTAGCATACACGCTGCCCCCAGCCTCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                          24;
                                                                                                                                                                                                                                                                                                                                                                                                                Length 1750;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                             Score 412.2; DB 10;
Pred. No. 2.6e-72;
0; Mismatches 513; In
                                                                                   /organism="Rattus norvegicus"
                                                                                                                                        /tissue_type="adrenal grand"
92. .1729
                                                                                                                                                                                                                                                                                                                                                                     504 t
                                                                                                                                                                                  /product="acyl-coenzyme
                                                                                                             /db_xref="taxon:10116"
/sex="male"
                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                    409 g
                                                                                               /strain="Wistar"
                                                                                                                                                                       /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 26.3%;
Best Local Similarity 58.7%;
Matches 764; Conservative
                                                                                                                                                                                                                                                                                                                                                                     456 c
                                                                                                                                                                                                                                                                                                                                                                     381
                                                                       source
                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        657
JOURNAL
                                                                                                                                                 ÷ cos
                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         å
```

```
AF053336 16-73 bp mRNA linear PRI 12-JUL-1999 Chlorocebus aethiops acyl-CoA:cholesterol acyltransferase 1 (ACAT1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Davis, M., Reagan, J., Clark, M., Shelness, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cercopithecus aethiops.

Cercopithecus aethiops

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Cercopithecus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 1673)
Anderson, R.A., Joyce, C., Davis, M., Reagan, J.W., Clark, M., Shelness, G.S. and Rudel, L.L.
Identification of a form of acyl-CoA:cholesterol acyltransferase yspecific to liver and intestine in nonhuman primates J. Biol. Chem. 273 (41), 26747-26754 (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1462
                                                                                                                                                    1136
                                                                                                                                                                                                     1102
                                                                                                                                                                                                                                                                                                                                                               1256
                                                                                                                                                                                                                                                                                                                                                                                                                  1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1283 TGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCG 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1557 GGAAAAGGCCAGTCTGGAACATCATGGTTCGGGCTTCCCTCTTCCTCGGCCATGGAGTCA 1616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    922
                                                                                                                              1197 TGCTGATGCTGTTCGTTTGTTTTTTTTTTGCACTGCTGATGCCTTTTGCTG
GGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTG
                                             1017 GGACTCCTACTGTAAGATGGGGTTATGTTGCTATGCAGTTTTTACAGGTTTTTGGTTGCC
                                                                                                                                                                                                                                                                                                           1043 TCTTCATGCTGCTGCTCATCTTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                               AGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAACTACTACCGCACTTGGAACGTGGTCCATGACTGGCTGTACAGCTACGTGTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1377 AGGACCTCTCTGGTTTTTCTCGAAGAGGTTCAGGCCTGCCGCCATGTTGGCCGTGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGTCAGCAGTGGTGCACGAGTACGCCCTCGCTGGTCTGCCTGAGCTACTTCTACCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1343 TCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGATGACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCAA
                                                                                                   TGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTTTTGCCAACATGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAATGTTACGCTTTGGTGACAGGATGTTTTATAAGGACTGGTGGAACTCTACATCGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1523 CTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Anderson, R.A., Joyce, C., and Rudel, L.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AF053336.1 GI:3582756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 1673)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9756918
```

```
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
HUMACYLCOA
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                              1222
                                                                                940
                                                                                                       922
                                                                                                                                                                                                    1042
                                                                                                                                                                                                                          1120
                                                                                                                                                                                                                                                 1102
                                                                                                                                                                                                                                                                       1180
                                                                                                                                                                                                                                                                                                1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                      982
                                                        862
        809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                       Dp
                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                     QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                               Óγ
                                                                                                                                                                                                                                                                                                                                                                                              δ
                              q
                                                        δy
                                                                                g
                                                                                                        ŏ
                                                                                                                              g
                                                                                                                                                      δ
                                                                                                                                                                         Dp
                                                                                                                                                                                                    ò
                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                               QY
                                                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                           KOLIAKKIKUTAABEELKPEPWKEUSHFEDDEYTULLEKSASIJUNGGGALTTFSILEG
EKNNHRAKDLRAPPEGGKIFIARRSLIDELLEVDHIRTIYHHTIALLILETISTLUVD
YLDGRALVEBESLLSYRAGKFEPVWWWIMELSTESVPTELPGRWATGYSKSHPLI
NSLEHGELEWYROJIGTGFOFTYVLAYTLEPRASTETIIFEDIREVWKAHSFYRENVP
RVLNSAKEKSSTVPIPTVNQYLYFLFAPTLIYRDSYPRNPTVRWGYVAMGPRACYFGOF
AEWLRFGDRWFYKDWRNSTSYSNYYRTWVVYHDWLYYYAYKDFLIHFIFSRAFHGWLNAF
AEWLRFGDRWFYKDWRNSTSYSNYYRTWNVVYHDWLYYYAYKDFLWFFSKREKSAAML
AVFAVSANVHEXALAYCLSFEYFYVLLOVFFFCMAFNINDSRKKPIWNVMMYTSLF
LGNGYLLCFYSQEWYARQHOLENNPTLLOYVRPSWITCHYVF
                                                                                                                                                                                                                                                                                                                                                                                                                                  3;
                                                                                                                                                                                                     /codon_start=1
/codon_start=1
/product="acy1-CoA:cholesterol acyltransferase 1"
/protein_id="acc62930.1"
/db_xref="GI:S82757"
/translation="MVGEEKMSLRNRLSKSRENPEEDEDQRKPAKESLEAPSNGRIDI

    cholesterol

          University
Salem, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGG 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCCCTGGGGAAACAGAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGIGCAGCAITICCGCACCAICTACCACAIGIICAICGCIGGCCIGIGIGICIICAICA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                749 CIGIGCCIGGGAICCIICGIGCCAGACGAGGIGAGGGGAICCAGGCCCCCAGIIICICCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGACGGGCCTGGGCCTTTTAGCCGCCCACGCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---ACGIGGCCGIGGAGCAICAGCICCCGCCGGCCICCCGII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGCACCCTGGCCATCGACTTCATTGATGAGGCCAGGCTGCTGGAGTTTGACCTÅC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTACATTITCAGTICCCTATTITCTGTTTCAACGTIGGGCCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                    56;
Direct Submission
Submitted (11-MAR-1998) Internal Medicine, Wake Forest
School of Medicine, Medical Center Boulevard, Winston-
27157, USA
                                                                                                                                                                                                                                                                                                                                                                                                           Length 1673;
                                                                                                                                                                 /BC_number="2.3.1.26"
//function="catalyzes formation of fatty acid
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                        /note="synonym: Cercopithecus aethiops"
                                                              1. 1673
/organism="Cercopithecus aethiops"
/db_xref="taxon:9534"
                                                                                                                                                                                                                                                                                                                                                                                                            Score 410.4; DB 9;
Pred. No. 6e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 506;
                                                                                                                                                                                                                                                                                                                                                                          550 t
                                                                                               /tissue_type="adrenal"
                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                       359 g
                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                              /gene="ACAT1"
                                                                                                                                                          /gene="ACAT1"
                                                                                                                                                                                                                                                                                                                                                                                                           26.2%;
ilarity 59.1%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                           υ
                                                                                                                    1. .1673
                                                                                                                                              .1653
                                                                                                                                                                                                                                                                                                                                                                        359
                                                                                                                                                                                            esters"
                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                          405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        647 TCC----
                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Simi
Matches 770;
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          467
                                                                                                                                                                                                                                                                                                                                                                                                                                                             287
 TITLE
JOURNAL
                                                                                                                         gene
                                                                                                                                                CDS
                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6
```

```
номасудсоа 4011 bp mRNA linear PRI 20-мау-1999
Homo sapiens acyl-coenzyme A: cholesterol acyltransferase mRNA,
complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human acyl-coenzyme
innese hamster ovary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 4011)

Chang, C.C., Huh, H.Y., Cadigan, K.M. and Chang, T.Y.

Molecular cloning and functional expression of human acyl-coenzyme A:cholesterol acyltransferase cDNA in mutant Chinese hamster ovars
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1462 CAGGICAGCCIGIACIGCCAGGAGIGGIACGCACGCGGCACIGCCCCTIACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1161
                                                                                                                                                                                                                        1000 ITCTICIAIGIGIACIACAICTITGAAAGACTITGIGCCCCTITGITICGGAATAICAAA 1059
                                                                                                                                                                                                                                                                                                                                                          1101
                                                                                                                   1420 GIGCICITIGIGCICITCATGITCTITGGANGGCTITCAACTICAATGAIAGI
                                                                                                                                                                                                                                                                                               1240 TCTAACTATTACAGAACCTGGAATGTGGTGCTCCATGACTGGCTATATTACTATGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1402 CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                            ATCTTCATGCTGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1342 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGGCCCGAGGGGTAGCCATGCTGGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGGTTCTTCTATCCC
G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                           AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                   GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1522 ACTITCIGGGGGCTGGTGACACCICGAICTIGGICCIGCCAI 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biol. Chem. 268 (28), 20747-20755 (1993)
94012607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L21934.2 GI:4878021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
```

2275

861

921

981

2515

ħ

```
1042 ATCTTCATGCTGCTCATCTTTGCCTTCCTCCATGCTGGCTCAACGCCTTTGCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                       2516 GIGCTGATTCTCTTCCTTACTTTTTTGCCTTTTTGCACTGCTGGCTCAATGCCTTTGCT 2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2636 TCCAACTATTATAGAACCTGGAATGTGGTGCATGACTGGCTATATTACTATGCTTAC 2695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CIGGICICCGCAGIGGCCCATGAGIAIAICTICIGCTTCGTCCTGGGGTTCTTCTATCCC 1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2876 CGGAAAAGCCGATTTGGAATGTTCTGATGTGGACTTCTCTTTTCTTGGGCAATGGAGTC 2935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                     CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTTATCCTGCATGCCAGGTTGCCAGGC 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1342 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                        2396 TTTTCTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCTTGTTTCGAAATATCAAA
                                                                                                                                                                                                                                                                                                                                        CAGGAGCCCTTCAGCGCTCGTGTTCTGGTCCTATGTGTATTTAACTCCATCTTGCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2217 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                                                                                                    AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2696 AAGGACTITCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTT
                                                 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                  G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                   2336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2996
                                                                                                                                                                                                                                                                                                                                                      2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2756
                                                 749
                                                                                                                                                                                    862
                                                                                                                                                                                                                                                     922
                                                                                                                                                                                                                                                                                                                     982
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1102
                                                                                                                  809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGU47320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                               ò
                                                                               g
                                                                                                                  ò
                                                                                                                                             g
                                                                                                                                                                                  ò
                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                 ΩD
                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSLEHGELEMIEQUOYLGEGPTYVULAYTLEPRASTETTIFEQIREVEKALSIKUSILE

RYLKASAKEKSTYPTPUNOYLYFLEAPTLIYEDSYPRHEYVEKGYVEKOFE

RYLYXIFERLCAPLEFNIKOOPFSARVOYLOVEVISILDGVLILELTFFAFELHCWINAF

AEMIARGDRMEYKOMNSTSYSONYYRTWNVYVHDWLYYAYKDFLMFFSKRRYSAAMI

AVFAVSAVVHEYALAVCLSFFYPVLFVLFWFFGMAFNFIVNDSRKKPIWNLMTSLF

13694 . 3389

3962 . 3967
                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="MVGEEKMSLRNRLSKSRENPEEDEDGRNPAKESLETPSNGRIDI
KOLAKKIKTARABELKPERMEVGSHEDDEVNTLIEKSAEDUNGGALTTFSVLEG
EKNHRRAKDIKAPPEGGKIFTARRSLLDELLEVDHIRFIYHMFIALILIETLSTLVVD
YIDEGRLVLEFSLLSYAFGKFPTVVWTWWIMFLSTFSVPYFLFOHWATGYSKSSHPLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ж
Э
                                                                                                                                                                                                                                                                                                                                                                      /product="acyl-coenzyme A: cholesterol acyltransferase"
/protein_id="AAC37532.2"
/db_xref="GI:4878022"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT 1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2097 TTCTAGGTTTTGGACCAACATATGTTGGTTAGCATATACACTGCCACCAGCTTCCCGGT 2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26; Gaps
            2 (bases 1 to 4011)
Chang,C.C. and Chang,T.Y.
Direct Submission
Submitted (02-NOV-1993) Biochemistry Dept, Dartmouth Medical
                                                                                                                                                    Dartmouth Medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGATCTÍCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGGCCAGGGGCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCATCCGCTGATCCGTTCTCTTTCCATGGCTTTCTTTTCATGATCTTCCAGATTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCC--------ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGCACCCTGGCCATCGACTTCATTGATGAGGCCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGACGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                          3 (bases 1 to 4011)
Chang, C.C. and Chang, T.Y.
Direct Submission
Submitsed (20-MAY-1999) Blochemistry Dept, Dartmouth Medischool, Hanover, NH 03755, USA
Sequence update by submitter
on May 20, 1999 this sequence version replaced gi:409203.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 4011;
                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
/cell_line="THP-1 (Phorbol ester activated)"
/cell_type="macrophage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 407.2; DB 9;
Pred. No. 2.4e-71;
0; Mismatches 508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1324
                                                                               School, Hanover, NH 03755, USA
                                                                                                                                                                                                                                                                                                                                      /standard_name="ACAT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             838 g
                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 26.0%;
Best Local Similarity 59.0%;
Matches 768; Conservative
                                                                                                                                                                                                                                                                                                                     3049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           793 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polyA_signal
COUNT 10
                                                                                                                                                                                                                                     source
                                             TITLE
JOURNAL
                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 407
                               AUTHORS
              REFERENCE
                                                                                                 REFERENCE
                                                                                                                                                                       REMARK
COMMENT
                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE CC
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

2815

```
3024 bp mRNA linear ROD 28-JUL-1996 complete cds.
U47320.1 GI:1408465
                                                                                                                                                                                                                                                                                                           Cricetulus griseus.
Cricetulus griseus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
Cricetulus.
2936 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCTCTGAAAATCCC 2995
                                                            ACTITCIGGGGGCTGGTGACACCTCGATCITGGTCCTGCCAT 1563
```

```
889 TCATIGITATACTIGAACAGATICGIAIGGIAAIGAAGGCICACICGITIGICAGAGAGA 948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
AF354622
                                                                                                                                                                                                                                                                                                                                                                                                                 1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1729
                                                                                                      803
                                                                                                                                                                                                                  923
                                                                                                                                                                                                                                                                          983
                                                                                                                                                                                                                                                                                                    1189
                                                                                                                                                                                                                                                                                                                                1043
                                                                                                                                                                                                                                                                                                                                                                                        1103
                                                                                                                                                                                                                                                                                                                                                                                                                                             1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1369
                                                                                                                                                                                                                                              1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                             863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Óλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ă
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                      q
                                                Q_{\underline{Y}}
                                                                         Пp
                                                                                                      δ
                                                                                                                              g
                                                                                                                                                             ò
                                                                                                                                                                                      g
                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                            /procedin_id="AAC52670.1"
/protein_id="AAC52670.1"
/db_xref="GI:1408466"
/translation="WGEBEKMSIRNRLSKSGENPEQDEAQRSVSDTQSNGRITHKQLI
/translation="WGEBEKMSIRNRLSKSGENPEQDEAQRSVSDTQSNGRITHKQLI
/translation="PMGEBEKMSIRNRLSKSGENPEDFYRLIEKSASLDNGSCALTTFSILEEMKNN
AKRRQLAAPAPEKGKIPTYSRSLLDELFEVDHIRTIYHMFIGLLIFFILSTLVVDYIDE
GRIVLERNILGYPREKLRINTMAMFLSTLSIPYERFEQRAMFGSYRTHNNN
HGFFFLVGLGILGFVPTYVLTVPATILPPASRFIVILEDIRMVMRAHSTVRENVENN
AAREKSSTVPVPTYNQYIFFLAPTLIYRDSYPRTPTVRMGFGSKTPRDFYLN
AREKSSTVPVPTYNQYIFFLAPTLIYRDSYPTPTVRMGFALGWLNAFAEM
RFGDRMFYNDWNSTSISNYYRTWNVVVHDWLYYYAYRDLMFFSKRFKSAAMLAVFA
LSAVVHEVALAVCLSYFYPVLFVLFREGMARNFTYNDSRKRFIWNIMVWASLFLGHG
VILCFYSQEWYARQHCPLKNPFFLDYVRPRSWTCQYVF"
1 (bases 1 to 3024)
Cao.G., Goldstein, J.L. and Brown, M.S.
Complementation of mutation in acyl-CoA:cholesterol acyltransferase (ACAT) fails to restore sterol regulation in ACAT-defective sterol-resistant hamster cells J. Biol. Chem. 271 (24), 14642-14648 (1996).
                                                                                                                                 Cao,G., Brown,M.S. and Goldstein,J.L.
Direct Submission
Submitted (26-JAN-1996) Guoqing Cao, Molecular Genetics, University
of Texas Southwestern, 5323 Harry Hines Blvd., Dallas, TX 75235,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGGTGGAGTTTGACCTAC 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTACACTITICAATICCCTATITCTIGITCCAACGITGGGCCCCATGGCTACAGCAAGACTI 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGIGCAGCATITICCGCACCATCIACCACATGIICAICGCTGGCCTGTGTGTCITCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACTGGACG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --CAGGCGACGGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TECTCTGCGCGCTGCCGCTGCCGTGGCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             529 AAGTGGACCACATCAGAACTATTTACCACATGTTCATTGGACTCCTCATCCTTTTATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
=
-
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 3024;
                                                                                                                                                                                                                                                                                          /note="acyl-CoA:cholesterol acyltransferase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 406.4; DB 10;
Pred. No. 3.6e-71;
0; Mismatches 516;
                                                                                                                                                                                                                                      1. .3024
/organism="Cricetulus griseus"
/db_xref="taxon:10029"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="15 A nucleotides"
674 c 651 g 97
                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                    /product="ACAT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25.9%;
58.5%;
                                                                                                                                                                                                                                                                           . .1781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ಡ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Simi
Matches 760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polyA_site
                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        629
                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            407
                                                                                           JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                    AUTHORS
                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
AF354622 1528 bp mRNA linear PRI 17-APR-2002
Gorilla gorilla cholesterol acyltransferase 1 (ACAT1) mRNA, partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gorilla gorilla.
Gorilla gorilla
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Gorilla.
                                                                                                                                                                                                                                                                                                                                                                                                                   1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1462
                                                                                                                                                                                                                             1128
                                                                                                                                                                                                                                                                                                                       1188
                                                                                                                                                                                                                                                                                                                                                                     1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATC 1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1343 TCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCTGACCAGC 1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1463 AGGICAGCCIGIACTGCCAGGAGTGGIACGCACGGCGGCACTGCCCCTIACCCCAGGCAA 1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1669 TTCTGTGCTTTTATTCTCAAGAATGGTATGCCCGCCAGCAGCACTGTCTGAAAATCCCA 1728
                                                                                                                                                                                                              1403 GCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCC.
                                                                                                                    1249 TACTGATGCTGTTCCTTACGTTCTTTGCCCTTTTTGCCTGGCTGCTGCTTTTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1429 AGGACCTCCTCTGGTTTTTCTCGAAGAGGTTCAAATCTGCCGCCATGTTGGCTGTCTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    949 ATGTACCTAGAGTACTAAATGCCGCCAAGGAAAAATCAAGCACAGTTCCAGTACCCACAG
                                                                                                                                                                                 GGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTG
                                                                                                                                                                                                                                                                                                                                                                     GAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1283 TGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCG
- - CAGGCCCCCAGTT
                                                                                         TCTCCAGCTACCTCTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTA
                                                                                                                                                                                                                                                                           TGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTTCATGCTGCTGCTCATCTTCTTTGCCTCCATTGCTGGCTCAACGCCTTTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1223 AGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGGTAGCCATGCTGGGTGTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 1528)
Stauffer, R.L., Walker, A., Ryder, O.A., Lyons-Weiler, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTCTGGATTATGTCCGGCCACGTTCCTGGACTTGTCA 1768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1523 CTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCA 1562
  CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:18028941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF354622
AF354622.1
```

```
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                          1282 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                             1102
                                                                                                                                              922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
BC028940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                    qq
                                                                                                                    qq
                                                                                                                                                                    g
                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δλ
à
                                              οy
                                                                  g
                                                                                             ò
                                                                                                                                              ŏ
                                                                                                                                                                                              οy
                                                                                                                                                                                                                                            ογ
                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                           òγ
                                                                                                                                                                                                                                                                                                                             WIMPLSTESVPYFLFQHWATGYSKSSHPLIRSLFHGFLFMIFQIGVLGFGPTYVVLA
YTLPPASRTIIFGOIRFVWKAHSFYRENVPRVLNSAKEKSSTVPIPTVNQYLYFLFA
TLYRDSYRFNIFVRWGYVAMKFQOYGGFFFVYYYIFEKLAPLFRNIKQEPFSARV
LVYCVFNSILPGYVLILETLFFFFFFHUWLNAFPEMLRFGDRMFYKDWNNSTSYSNYYR
WNVVVHDWLYYYAYKDFLWFFSKRFKSAAMLAVFAVSAVVHEYALAVCLSFFYPVLFV
                                                                                                                                                                                                                                                                                           /translation-"NPAKESLETPSNGRIDIKOLIAKKIKLTAEAEELKPFFMKEVGS
HFDDFVTNLIEKSASLDNGGCALTTFSVLEGEKNNHRAKDLRAPPEQGKIFIARRSLL
DELLEVDHIRTIYHMFIALLILFILSTLVVDYIDEGRLVLEFSLLSYAFGKFPTVVWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3;
                                                                                                                                                                                                                                                                                                                                                                                           LEMFFGMAFNFIVNDSRKKPIWNVLMWTSLFLGNGVLLCFYSQEWYARQHCPLKNPTF
                                                                                                          of Biology, The Pennsylvania
University Park, PA 16802, USA
          paleontological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      287 CATCCCTGGGGAAACAGAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGCACCCTGGCCATCGACTTCATTGATGAGGCCAGGCTGCTGCTGGAGTTTGACCTAC 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    682 TCATCATTATATATCGAGCAGCTATTGTAATGAAGGCCCACTCATTTGTCGAGAG 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCACCCTGTTGGCGCCCGTACCAGGCCCTTACGGCTGTGGGGCCAGGGGCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGACGGGCCTGGGCTGTGCGCCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      647 TCC------ACGTGGCCGTGGAGCATCAGCTCCCGCCGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    689 GIGICCIGGICTICGAGCAGGITAGGITCCIGAIGAAAAGCIACTCCTICCIGAGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1528;
           constraints on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                          /product="cholesterol acyltransferase 1"
                                                                                                                                        1. .1528
/organism="Gorilla gorilla"
/db_xref="taxon:5593"
/cell_type="cultured fibroblast cells"
<1. .1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.9%; Score 405.8; DB 9; 59.5%; Pred. No. 5e-71; ive 0; Mismatches 487;
                                                                                                                                                                                                                                                                                                                                                                                                                   519 t
                                                                                           Direct Submission
Submitted (27-FEB-2001) Department
State University, 208 Mueller Lab,
Location/Qualiflers
           ape molecular clocks and
                                 Hered. 92 (6), 469-474 (2001)
                                                                                                                                                                                                                                                                    /protein_id="AAL56227...
/db_xref="GI:18028942"
                                                                                                                                                                                                                                                                                                                                                                                                                  319 g
                                                                                                                                                                                                                                              /codon_start=3
                                                                                                                                                                                                         /gene="ACAT1"
<1. .>1528
                                                                                                                                                                                                                                  /gene="ACAT1"
                                                                 2 (bases 1 to 1528)
Hedges, S.B.
                                                                                                                                                                                                                                                                                                                                                                                                                   329 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 754; Conserv
Hedges, S.B.
                     hypotheses
           Human and
                                           21945518
11948213
                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loca
Matches
                                                                                AUTHORS
TITLE
JOURNAL
                                 JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      527
                                                                     REFERENCE
                                                                                                                                                                                               gene
                                                                                                                               FEATURES
          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oy
do
```

```
PRI 16-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 3407)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1401
                                                                                                                                                                                                                                                                                                                                              1041
                                                                                                                                                                                                                                                                                                                                                                                       1040
                                                                                                                                                                                                                                                                                                                                                                                                                                  1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1162 TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT 1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1462 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              980
                                                                                   861
                                                                                                                                                                        921
                                                                                                                                                                                                              920
                                                                                                                                                                                                                                                         981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens, sterol O-acyltrainsferase (acyl-Coenzyme A:
cholesterol acyltransferase) 1, clone MGC:29940 IMAGE:4991365,
mRNA, complete cds.
                                                                                                                                                                                                                                                                                921 TITICIAIGITERACICITIGAAGCITIGECCCCTIGITICGAATAICAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1101 GAGATGTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTCCACGTCATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      742 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                         862 AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                               GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                              982 CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                       981 CAGGAGCCCTTCAGCGCTCGTGTTCTGGTCCTATGTGTGTTTAACTCCATCTTGCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                               1042 ATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCGAGGGGTAGCCATGCTGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1402 CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
749 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                   809 G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3407 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BC028940.1 GI:20809439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strausberg, R.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTTTCT 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1521 ACATTT 1527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BC028940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
```

```
647 TCC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1462
                                                                                                                                                                                                                                                                                                                   749
                                                                                                                                                                                                                                         689
                                                                                                                                                                                                                                                                                                                                                                                        809
                                                                                                                              704
                 527
                                                                                         587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                   pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δy
                                                Q
                                                                                         δ
                                                                                                                              a
                                                                                                                                                                   ò
                                                                                                                                                                                                    d
                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KQLIAKKIKITABABEELKPFFMKEVGSHFDDFVTNLIEKSASLDNGGCALTTFSVLEG
EKNNHRAKDLRAPPEQGKIFTARRSLLDELLEVDHIRTIYHNFIALLILETLSTLVVD
YLDGRULVEESLLSYAFGKFPTVWHWAINELSTFSVPYFLFQHWATGYSKSSHPLI
RSLFHGFLFWLFQIGVLGFGFTYVVLAYTLFPASRFIIIFEQIRFVMKAHSFYRENVP
RVLNSAKEKSSTVPIPTVNQYLYFLFAPTLIYRDSYPRNFTVFWGYVAMKFAQVFGCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FYVYYIFERLCAPLFRNIKOBEFSARVLVLCVFNSILDGVLILELTFFAFLHCWLNAF
AEMLRFGDRMFYKDWWNSTSYSNYYRTWNVYVHDWILYYAYKDFLWFFSKRFKSAAML
YRAYASAVYHEYALAYCLFFFYPVLFVLFWFFGMAFNFIVNDSRKKPIWNVLMWTSLF
LGNGVLLCFYSQEWWARQHCFLKNPFFLDYVRPRSWTCRYVF"
628 C 681 G 1158 L
                                                                                                                                                                                                                                                                                                                                                 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 42 Row: i Column: 23
This clone was selected for full length sequencing because it
passed the following selection criteria: Similarity but not identity to protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="sterol O-acyltransferase (acyl-Coenzyme A:
cholesterol acyltransferase) 1"
protein_id="AAHISB40.1"
/db xref="GI:20809440"
/translation="MVGEEKMSLRNRLSKSRENPEEDEDORNPAKESLETPSNGRIDI
Submitted (01-MAY-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                              X., Hulyk, S.W., Hale, S.M., S., Martin, R.G., Muzny, D.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        347 AGGIGCAGCALTICCGCACCAICIACCACAIGIICAICGCIGGCCIGIGIGICIICAICA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  287 CATCCCTGGGGAAACAGAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                            CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Baylor College of Medicine Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 405.6; DB 9; Length 3407;
Pred. No. 5.1e-71;
0; Mismatches 509; Indels 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="MGC:29940 IMAGE:4991365"
/tissue_type="Placenta, choriocarcinoma"
/clone_lib="NHLMGC_10"
/lab_host="DH10B"
/note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                          Sequencing Center
Center code: BCM-HGSC
Web Site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amg@bcm.tmc.edu
Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyl
Yoon, V.S., Kowis, C.R., Lawrence, S., Mart
Richards, S., Gibbs, R.A.
                                                                          NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo saplens"
/db_xref="LocusID:6646"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
                                                                                                 Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25.9%;
58.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   767; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S:
Matches 767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407
     JOURNAL
                                                                             REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                όχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
```

```
1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT 1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     943 GICAACCAGTATITGTACTICTTATITGCTCCTACCCTTATCTACCGTGACGATATCC 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1063 TTTTCTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1042 ATCTICATGCIGCICATCTICTITGCCTTCCTCCATIGCTGGCTCAACGCCTITGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1303 TCCAACTATTATAGAACCTGGAATGTGGTGCATGACTGGCTATATTACTATGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1363 AAGGACITICICIGGITITICICCAAGAGAITCAAAICIGCIGCCAIGITAGCIGITIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCACCGGCCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                  CTCATCCGCTGATCCGTTCTCTCCTCCATGGCTTTCTTTTCATGATCTTCCAGATTGGAG
                                                                                                                                                                                                                                                                                   G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                982 CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGGCCAGGGGCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                  CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         862 AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   922 GIGCICIAIGCCIGCTICAICCIGGGCCGCCTCIGIGITCCIGICIIIGCCAACAIGAGC
                                             644 CTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGGCCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                         ---ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                      764 TICTAGGITTIGGACCAACATATGTIGTGTTAGCATATACACIGCCACCAGCTICCCGGT
                                                                                          CGACGGGCCTGGGCCTGTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATTTTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGT 1704
```

Thu

```
3;
                      PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                               AGGAATCCCACTGTAAGATGGGGTTATGTCGCTATGAAGTTTGCACAGGTCTTTGGTTGC 2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT 921
                                                                                                                                                                                                                                                                       287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                    AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            749 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTACATTTTCAGTTCCCTATTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 647 TCC-----ACGTGGCCGTGGAGCATCAGCTCCCGCCGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2217 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                            TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGACGGGCCTGGGCTGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                          Length 4011;
                                                                                                             1 (bases 1 to 4011)
ChangyT.Y. and Chang,C.C.Y.
Acyl coenzyme A:cholesterol acyltransferase (ACAT)
Patent: US 5834283-A 3 10-NOV-1998;
                      linear
                                                                                                                                                                                                                         25.9%; Score 405.6; DB 6;
llarity 58.9%; Pred. No. 5e-71;
Conservative 0; Mismatches 509;
                 Sequence 3 from patent US 5834283. AR053912. GI:5978774
                                                                                                                                                                                          1324
                                                                                                                                                         Location/Qualiflers
                                                                                                                                                                             /organism="unknown"
792 c 839 g
                                                                                                                                                                   .4011
                                                                                                  Unclassified
                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                         1056 a
                                                                            Unknown
                                                                                       Unknown
                                                                                                                                                                                                                                               767;
                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                       Local
                             DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                 Matches
                                                                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                      1797
                                                                                                                                                                                                                                                                                                                                                                                      1857
                                                                                                                                                                                                                                                                                                                                                                                                                                  1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2396
                                                                                                                                                                                                                                                                                                                    347
                                                                                                                                                                                                                                                                                                                                                                                                            467
                                                                                                                                                                                                                                                                                                                                                                                                                                                        527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2037
RESULT 15
AR053912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               922
                                                                                                                                                                                                                                                                                                                                                                407
                                                                                                         REFÉRENCE
                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                 ô
```

Search completed: April 30, 2003, 14:09:08 Job time: 2957 secs

```
GIGCIGATICICTICCTIACTITITITICCTITITICACCCCCAATGCCTTTGCT 2575
                                                                                                                                                                                       1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC 1341
                                                                                                                                                                                                                                                                                                                                                   GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                           CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1462 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCACTGCCCCTTACCCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTACTCTGCTTTTATTCTCAAGAAFGCTATGCACGTCGGCACTGTCCTCTGAAAATCCC 2995
CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATCCTGCATGCCACGTTGCCAGGC 1041
                                                                                                                                                                        TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT 1221
                                                                                                                                                                                                                                                                                                                                                                                                                            2576 GAGATGTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTCCACGTCATAC
                                                                                                                                                                                                                              1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTGTTC
                                                                                                                 GAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                        1042 ATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTITICTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                              2816
                                                                                                                                                                                                                                                                                                                                                                                                           1402
                                                                                                               1102
                                                                                                                                                                        1162
                                                                                                                                                                                                 2636
                                                                                                                                                                                                                                                                                                                    2756
                                                                                                                                                                                                                                                                                                                                                 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1522
                                                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                                                                                                                                                                                                     QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                     Op
                                                      ò
                                                                             Q
                                                                                                            ο̈́λ
                                                                                                                                    qq
                                                                                                                                                                        ò
                                                                                                                                                                                           g
                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                 οχ
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
```

(OT98U) NNAJB JUAN CIII.

melanog

Titlè: Perfect score: Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Database

```
Human secreted pro-
Human ovarian canc
Mouse Diacylglycer
DNA encoding a hum
Rat acyl COA:chole
Acyl-COA:cholester
Rat sterol acyltra
Corn diacylglycero
Chemically pretrea
Wheat diacylglycero
Human spliced tran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Soybean diacylglyc
Human immune/haema
M. alpina acyl CoA
Acyl-CoA:cholester
Mortierella alpina
               Drosophila melanog
Acetl coenzyme A:
Human acylcoenzyme
Human acylcoenzyme
Human acylcoenzyme
Human acylcoenzyme
Human acyl Coenzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gene encoding a su
Arabidopsis diacyl
A. thaliana diacyl
Arabidopsis acyl C
                                                                                                                               DNA encoding a pro
Human ACAT Related
                                                                                                                                                                    cDNA encoding nove
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; ACAT Related Gene Product 2; ARGP2; enzyme;
acyl Coenzyme A-cholesterol acyltransferase 1; ACAT1; ACAT2;
sterol esterification; lipid homeostasis; diacylglycerol acyltransferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human ACAT Related Gene Product 2 ARGP2 coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualiflers
52..1620
/*tag= a
/product= "Human ARGP2"
                                                                                                                                                                                                                       ABL81686
AAX49452
AAX30335
AAA88846
AAZ45385
                                                                                                                                                                                                                                                                                                                                                        AAA48934
AAA48933
                                                                                                                                                                                                                                                                                                                                                                                                              AAA48938
AAS63338
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA48942
ABN36849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA10594
AAA48932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA48939
                                                                                                                                                                                                                                                                                                                    AAS01105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ45380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA88835
                                                                                                                                                                                     AAS27244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA245371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA76170 standard; DNA; 2040 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYCO ) UNIV COLUMBIA NEW YORK
 98US-0165042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0165042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-DEC-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
1942
4170
519
519
519
10732
1888
1904
1942
1942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JS6100077-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-AUG-2000
                                                                                                                                                                  DGAT; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA76170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA76170
 egin{array}{c} \mathbf{7} & \mathbf{7} 
                                                                            O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human ACAT Related
Human acyl CoA:cho
Mouse acyl CoA:cho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human acyl-coenzym
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acylcoenzyme A:cho
Drosophila melanog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human acylcoenzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acetyl coenzyme A:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human acylcoenzyme
                                                                                                                         April 30, 2003, 12:17:55 ; Search time 262 Seconds (without alignments) 13486.204 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                   US-09-918-026A-3
1569
1 atggagccagggggggccg.........cttggtcctgccatacctag
                 version 5.1.4_p5_4578 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                      2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA76170
AA257360
AA257359
AAV01534
AAQ63212
AAQ63212
AAT96368
AAV01545
                                                                                         - nucleic search, using sw model
                                                                                                                                                                                                                                                                               IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                 GenCore
Copyright (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        greater than or equal to
s derived by analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2040
1509
1607
1082
4011
3649
3650
455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.7
90.9
70.9
41.1
26.0
25.7
25.1
112.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
```

1564.2 1425.8 1112.4 645 407.2 404 394.6 191.8

Score

Result . 0

Acyl-CoA:cholester

or.

```
The enzyme acyl Coenzyme A-cholesterol acyltransferase 1 (ACAT1) mediates sterol esterification, an important component of intracellular lipid momeostasis. The present sequence is the coding sequence of human ACAT Related Gene Product 2 (ARGP2/ACAT2). The enzyme encoded by the present sequence is a diacylglycerol acyltransferase (DGAT). ARGP2 esterifies cholesterol. Also, the activity of ARGP2 is relatively resistant to histidine active site modifier. ARGP2 is therefore a tissue specific sterol esterification enzyme.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCATCAGCTCCCGCCGCCTCCCGTTGTGTCTTCGAGCAGCTAGGTTAGGTTCCTG 720
                                                                                                                                                                                                                                                                                                                                      GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA: 120
                                                                                                                                                                                                                                                                                                                                                                                      TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                                                                                                                                                 Gaps
                                                          New nucleic acid encoding a human diacylglycerol acyltransferase, useful for treating hyperlipidemia, atherosclerosis, heart disease, other diseases associated with an imbalance of triglyceride levels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTACCAGGCCTACGCTGTGGGCCAGGGCACCTGGACGCAGGCGACGGCCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGTACCAGGCCCTACGCTGTGGCCAGGGCACCTGGACGCAGGCGACGGCCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGCGCCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGGTTGATGGAGGTGCAGCATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCAGCACCCTGGCC
                                                                                                                                                                                                                                                                                                                         ATGGAGCCAGGCGGGCCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                         21; Length
                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                               Sequence 2040 BP; 389 A; 604 C; 577 G; 470 T; 0 other;
                                                                                                                                                                                                                                                                                                 3;
                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                     Score 1564.2;
Pred. No. 0;
0; Mismatches
                                                                                                             Disclosure; Fig 2B; 32pp; English
                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                        99.78;
                                                                                                                                                                                                                                                                                     Best Local Similarity 99.8
Matches 1566; Conservative
Oelkers
                       2000-557622/51
                                  P-PSDB; AAB21640
SĽ,
                                                                                                                                                                                                                                                                           Match
Sturley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            712
                                                                                                                                                                                                                                                                                                                                                  52
                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                   112
                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                  172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                            Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               óλ
ò
                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
```

240

291

231

300

351

360 411 420 471 480

531

540

591

600

099

ó

```
1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1500
                                                                                                                                                                                                                                                                       1200
                                                                                                                                                                                                                                                                                                            1260
                                                                                                                                                                                                                                                                                                                                                 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1491
                                                                                                                                                                                                               1131
                                                                                                                                                                                                                                                   1191
                                                                                                                                                                                                                                                                                         1251
                                                                                                                                                                                                                                                                                                                                                                                                           1431
                                                                                               951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1432 AACTTCATGATGCATGACCAGCGCACCGGCCGCGTGGAACGTGCATGTGGACGTGGACGTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CIGCAIGCCACGTIGCCAGGCATCTICAIGCTGCTGCTCCTTCTTTGCCTTCCTCCTTCAT
                                                                                                                                                                                                                                            166CTGTACAGCTACGGGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCAGGG
                                                                                                                                                                                                                                                                                                                            TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCCTCCTTGGTGCCCGGGCCCGAGGG
                                                                                                                                                                                                                                                                                                                                                             GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                              AACTICATGATGCATGACCAGCGCACGGCCCGGCATGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCAT
                                                                                                                                                                                                                                   TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                                        TGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGAC
                                                                                                                                                                                                                                                                                                                                                  GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC
                                     GAGGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTTCTTCTTGCCCAACACTC
                                                ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                   TITGCCCCAGGCCCTGGGATGTGTGTTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                        CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; acyl CoA:cholesterol acyltransferase; ACAT-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human acyl CoA:cholesterol acyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA; 1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1612 CATACCTAG 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ57360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ57360,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1561
                                                                                                                                                                                                                                                                          1141
                                                                                                                                                                                                                                                                                           1192
                                                                                                                                                                                                                                                                                                              1201
                                                                                                                                                                                                                                                                                                                                  1252
                                                                                                                                                                                                                                                                                                                                                     1261
                                                                                                                                                                                                                                                                                                                                                                                           1321
                                                                                                                                                                                                                                                                                                                                                                                                                                 1381
                                                                                                                                                                           1012
                                                                                                                                                                                               1021
                                                                                                                                                                                                                 1072
                                                                                                                                                                                                                                                      1132
                                                                                                  892
                                                                                                                                        952
                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                        1312
                                                          832
                                                                                                                                                          196
                     772
                                                                               841
                                                                                                                    901
                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ57360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δλ
                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                             g
                    g
                                        οy
                                                         qq
                                                                              δλ
                                                                                                 g
                                                                                                                     á
                                                                                                                                      g
                                                                                                                                                          ò
                                                                                                                                                                          q
                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                     δλ
                                                                                                                                                                                                                                                    pp
                                                                                                                                                                                                                                                                          δλ
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                             δy
                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                           Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                  ρý
```

```
481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
  241
                                             301
                                                                                         361
                                                                                                              301
                                                                                                                                     421
                                                                                                                                                                                  481
                                                                                                                                                                                                        421
                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                      qq
                                              ò
                                                                  qq
                                                                                        ŏ
                                                                                                              a
                                                                                                                                     ò
                                                                                                                                                         q
                                                                                                                                                                                  ò
                                                                                                                                                                                                       g
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         óγ
                                                                                                                                                                                                                                                                                                                                                                       The present sequence encodes the human acyl CoA:cholesterol
acyltransferase designated ACAT-2. ACAT-2 polypeptides can be
acyltransferase designated ACAT-2. ACAT-2 polypeptides can be
administered therapeutically, especially by expressing encoding
complynucleotides, to treat individuals in need of ACAT-2 polypeptide.
CC polynucleotides, to treat individuals in need of ACAT-2 polypeptide.
CC polynucleotides, to treat choistered to treat disease conditions
associated with elevated cholesterol ester levels e.g.
Chypertriglyceridaemia, since ACAT-2 catalyses the esterification of
cholesterol with fatty acyl CoA substrates. The polypeptides can also
compensed to activity, by analysing for polypeptide presence or amount in a sample.
CC they are useful to screen for compounds inhibiting or activating the
polypeptide, which can be included in pharmaceutical compositions and
administered therapeutically to treat conditions associated with ACAT-2;
inhibitory agents can especially be used to inhibit ACAT-2 activity,
inhibit ACAT-2 and not prior art ACAT-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ή
                                                                                                                                                                                                                                                                                                                      Novel polypeptide, useful to treat conditions associated with elevated cholesterol ester levels e.g. hypercholesterolemia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCGCCAACCCTGTGGAGATGGAACACTGAGACGCCACAGAGCCCCGGACTTGGTACAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGAGCCAGCCGGCCCGTCTGCAGAGACAGAAGGCTGGGAGGGGAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGGAGCCAGGGGCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 21; Length 1509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90;
antilipaemic; hypercholesterolaemia; hypertriglyceridaemia;
hyperlipidaemia; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1509 BP; 260 A; 457 C; 439 G; 351 T; 2 other;
                                                                             /*tag= a
/product= "ACAT-2"
/transl_except= (pos:571..573,aa:Xaa)
/note= "Xaa is unspecified"
                                                                                                                                                                                                                                                                Erickson SK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1425.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 0;
0; Mismatches
                                                         Location/Qualifiers
1..1509
                                                                                                                                                                                                                                                                                                                                                        Example; Page 52; 57pp; English.
                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 95.6%;
Matches 1500; Conservative
                                                                                                                                                                                                                                                                Novak
                                                                                                                                                                                                       98US-0090354
99US-0328857
                                                                                                                                                                                                                                         (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                                                                                                Farese RV,
                                                                                                                                                                                                                                                                                    WPI; 2000-106291/09.
P-PSDB; AAY67953.
                                   sapiens
                                                                                                                                    W09967368-A1
                                                                                                                                                                                                       23-JUN-1998;
08-JUN-1999;
                                                                                                                                                                            16-JUN-1999;
                                                                                                                                                            29-DEC-1999
                                                                                                                                                                                                                                                               s,
                                                                                                                                                                                                                                                               Cases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                   Ношо
                                                         Key
 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

```
1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATC 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                  360
                                                                                                                                  420
                                                                                                                                                                    360
                                                                                                                                                                                                    480
                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                            999
                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCATCAGCTCCCGCCGGCCTCCCGTTGTGTCCTGGTCTTCGAGCAGGTTAGGTTCCTG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721 GAGGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTTCTTCTTCTGCCCAACACTC 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
CCTCTGCCCCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                            CCTGTCTTTGCCAACATGAGCCGAGACCCCTTCAGCACCCGTGCCCTGGTGCTCTTTT
                                                                                                                                                                                                                                                                    721 ATGAAAAGCTACTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGGGATCCAGGCCCCCAGTTCTCCCAGCTACTCCTCTTCTGCCCAACACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAGCCATGCTGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1321 GTCCTGGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG
                                                                                  TGTGCGCCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901 TITGCCCAGGCCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                    CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCAGCACCCTGGCC
                                                                                                                                                    CGCACCATCTACCACACATGTTCATCGCTGGCCTGTGTGTTTCATCATCATCACCACCCTGGCC
                                                                                                                                                                                                      ATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                                      CAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC
                                                                                                                                                                                                                                                                                                                                            CCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGGCGACGGGCCTGGGC
                241 CCTCTGCCCCACCTCCCCCAGGTTCCTTGAGCAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

ä

```
891
                                                                                                                                                                     85
                                                                                                                                                                                                                                                   205
                                                                                                                                                                                                                                                                                          265
                                                                                                                                                                                                                                                                                                                                  325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δλ
                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò.
SSSSSSXS
                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                               δy
                                                                                                                                               d
                                                                                                                                                                     ð
                                                                                                                                                                                         g
                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence encodes the mouse acyl CoA:cholesterol acyltransferase designated ACAT-2 ACAT-2 polypeptides can be administered therapeutically, especially by expressing encoding polynucleotides, to treat individuals in need of ACAT-2 polypeptide. They may especially be administered to treat disease conditions associated with elevated cholesterol ester levels e.g. hypercholesterolaemia or hyperlipidaemia (including hypertiglyceridaemia), since ACAT-2 catalyses the esterification of cholesterolamia, and acativity acyl coA substrates. The polypeptides can also be used to diagnose diseases related to polypeptide expression or activity, by analysing for polypeptide presence or amount in a sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel polypeptide, useful to treat conditions associated with elevated cholesterol ester levels e.g. hypercholesterolemia
                                                                                                           CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
                                                                                AACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                      Mouse; acyl CoA:cholesterol acyltransferase; ACAT-2; diagnosis; antilipaemic; hypercholesterolaemia; hypertriglyceridaemia;
                                                                                                                                                                                                                                                                                  Mouse acyl CoA: cholesterol acyltransferase 2 encoding cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Erickson
                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
30..1607
/*tag= a
/product= "ACAT-2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57pp; English.
                                                                                                                                                                                                                          BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                         CDNA; 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novak
                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US13683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0090354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0328857
                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Farese RV,
                                                                                                                                                                                                                                                                                                                              hyperlipidaemia; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-106291/09
                                                                                                                                                     CATACCTAG 1569
                                                                                                                                                                         CATACCTAG 1509
                                                                                                                                                                                                                          AAZ57359 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example; Page 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P-PSDB; AAY67952
                                                                                                                                                                                                                                                                                                                                                 musculus
                                                                                                                                                                                                                                                                                                                                                                                                                   W09967368-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-JUN-1999;
                                                                                                                                                                                                                                                                 05-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                       29-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cases S,
                                                                                                                                                                                                                                              AAZ57359;
                                                                                            1381
                                                                                                              1501
                                                                                                                                  1441
                                                                                                                                                                          1501
                                                     1321
                                                                                                                                                       1561
                                                                         1441
              1261
                                                                                                                                                                                                                                                                                                                                                  Mus
                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                       RESULT 3
                                                                                                                                                                                                                  AAZ57359
                                                                                                                                                                                                                                               Pp
                                                                                                                                 g
                                                                                                                                                        ò
              g
                                   ò
                                                     g
                                                                         δ
                                                                                            음
                                                                                                                ŏ
```

```
They are useful to screen for compounds inhibiting or activating the polypeptide, which can be included in pharmaceutical compositions and administered therapeutically to treat conditions associated with ACAT-2; inhibitory agents can especially be used to inhibit ACAT-2 activity, especially therapeutically, and especially agents which selectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGGGGATCCAG 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGCCGGCCTCCCGTTGTGTCTTCGTGCTGGGGTTAGGTTCCTGATGAAAAGCTAC 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     384
                                                                                                                                                                                                                                      AACACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCTGTG 144
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                               28 CTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGGGAGCGCCAACCCTGT---GGAGATGGA 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCGCCACGCCGTGGTGCTCTGCGCGCTGCCGTCGGCCGTGGAGCATCAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCCCAGTITCTCCAGCTACCTCCTTCTTCTGCCCAACACTCATCTACAGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCAGGCC
                                                                                                                                                                                                                                                                                                                                                                     TCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTCCGCACCATCTACCACATGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     445 CTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     565 GCCA-------GGGGCACCTGGACGCGACGGCCTGGGCTGTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                    505 Accressrectaretreterecacerstresecedetaceassectares
                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCACCTCCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    385 GCTGGCCTGTGTCTTCATCATCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGG
                                                                                                                                                    Length 1607;
                                                                                                                                                                                     15;
                                                                                                                                                    Score 1112.4; DB 21; Lengt
Pred. No. 3.7e-267;
0; Mismatches 247; Indels
                                                                                                                      Sequence 1607 BP; 299 A; 466 C; 456 G; 385 T; 1 other;
                                                                                       inhibit ACAT-2 and not prior art ACAT-1.
                                                                                                                                           70.9%; Scor.
83.2%; Pred
0; }
                                                                                                                                                                                          Conservative
                                                                                                                                                                       Similarity
                                                                                                                                                                                        Matches 1295;
                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           831
                                                                                                                                                                                                                                                                                                                                                         145
```

```
Sturley SL;
                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                     1021
                                                                                                                                                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                       1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    484
Ω
                                                                                                                                                                                                                                                                                                                                                                                                                  QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                              1452
                                                                                                                                                                                                                                                                                               1490
                                                                                                                                                                                 CAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCTTA 1512
                                                                  1033 TTGCCAGGCATCTTCATGCTGCTGCTCATCTTTTGCCTTCCTCCATTGCTGGCTCAAC 1092
                                                                                                              ACTICCTICTACCAACTACCGCACCTGGAACGTCGTGGTCCATGACTGGCTGTACAGC 1250
                                                                                                                                                                                                                                            1333 TTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATG 1392
                                                                                                                                                                                                                                                                                                                                1491 CAGGGCATCCAGGTCAGCCTATACTGCCAGGAGTGGTATGCTCGTCGACACTGTCCCCTG 1550
                                                                                                                                                                                                                                                                                                                                                 1513 CCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                          1551 CCCCAGACATTCTGGGGGATGGTGACACCCCAATCTTGGTCCTGCCATACCTAG 1607
         AACATGAGCCGAGGCCCTTCAGCACCCGTGCCCTGGTGCTCTTCTATCCTGCATGCCACG
                                                                          1071 GGGCCAGGCATCTTCATGCTGCTCCTCATCTTTCGCCTTCCTGCACTGCTTGACTCAC
                                                                                                     GCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCA
                                                                                                                                      ACGTCCTTCTCCAACTACTACGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGC
                                                                                                                                                                         TACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTG
                                                                                                                                                                                                           GGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTC
                                                                                                                                                                                                                                                                              CATGACCAGCGCACGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC
913 CTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTTCCTGTCTTTGCC
                                                                                                                                                ACAT related gene product 2; human; sterol esterification;
inhibitor; atherosclerosis; hyperlipidaemia; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human acylcoenzyme A:cholesterol acyltransferase III DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acylcoenzyme A:cholesterol acyltransferase III; ARGP-2;
ACAT related gene product 2; human; sterol esterificati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                            AAV01534 standard; DNA; 1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97WO-US09460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96US-0657620
                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9745439-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                             AAV01534;
                                973
                                                                                                                                                                                                                                                                                                               1453
                                                                                                                                                                        1213
                                                                                                                                                                                                                          1311
                                                                                                                                                       1191
                                                                                                                                                                                                                                                                                                                                                                                                    AAV01534
                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                  QQ
                                                                                                     ò
                                                                                                                  qq
                                                                                                                                    δ
                                                                                                                                                      g
                                                                                                                                                                                        g
                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                              g
                                 õ
                                                 a
                                                                  ò
                                                                                                                                                                       ò
                                                                                                                                                                                                          ð
```

```
This isolated nucleic acid molecule encodes human acylcoenzyme
A:cholesterol acyltransferase III (see AAW43407), or ACAT related
gene product 2 (ARGP-1), whose expression appears to be restricted
to the foetal liver, suggesting it to have a role in lipid
metabolism during development. It was identified following
database searching for human ACAT-related sequences and use of PCR
and RACE to obtain full-length sequences. An isolated nucleic acid
(see AAV01533) for human ARGP-1 (see AAW43406) was also identified.
(see AAV01533) for human ARGP-1 (see AAW43406) was also identified.
(see AAV01533) for human ARGP-1 (see AAW43406) was be of PCR
nucleic acids can be used to treat or diagnose a subject who has an
nucleic acids can be used to treat or diagnose a subject who has an
content of a unique sequence of nucleotides in the isolated
hybridising to a unique sequence of nucleotides in the isolated
can be used to inhibit wild-type ARGP-1 or ARGP-2. The wild-type
can zement of atherosclerosis or hyperlipidaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACTTCATGATGCATGACCAGCGCACCGGCATGGAACGTGCTGATGTGGACCATG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATC 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCAT 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGAAGGAATGTTG 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244 TGGTGGAACTCAACGTCCTTCTCCAACTACTACCCACTTGGAACGTGGTGGTCCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCCTGGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTGCCCAGGCCCTGGGATGTGTGTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184 TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1201 TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                       or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1082;
                                                                                                                                                                                                                                acyltransferase
treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1082 BP; 205 A; 304 C; 286 G; 287 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 9.4e-151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                            DNA encoding acylcoenzyme A: cholesterol
III - useful to identify inhibitors for
atherosclerosis or hyperlipidaemia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 645;
                                                                                                                                                                                                                                                                                                                                                                     Claim 7; Fig 16; 121pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41.18; 97.88;
(UYCO ) UNIV COLUMBIA NEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 97.8
Matches 654; Conservative
                                                                                                                              WPI; 1998-032573/03
                                                                                                                                                                 P-PSDB; AAW43407
```

ö

1140

1380

543

ဖ

3;

ò

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
XX
So
                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the design of drugs serving as specific ACAT inhibitors, desirable for the prevention and/or treatment of human hypercholesterolaemia and human artherosclerosis. It also allows the design of antisense DNAs or RNAs to inhibit ACAT prodction, or probes to identify different forms of human ACAT or ACAT from different animal species.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1397..3049
//rtag= a / /rtag= 3385..3389
/*ttag= b / /rtag= b / /rtag= b / /rtag= 3962..3389
3962..3389
/*tag= c / /rtag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The acetyl coenzyme A: cholesterol acetyl transferase (ACAT) gene sequence enables the screening of human populations for abnormal human ACAT activities for disease diagnosis. It provides information concerning the catalytic mechanism of ACAT and allows
                     CACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCCTCGATCTTGGTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acetyl coenzyme A; cholesterol acetyltransferase; ACAT; disease; diagnosis; detection; screening; treatment; prophylaxis; hypercholesterolaemia; atherosclerosis; antisense; probe; identification; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acetyl coenzyme A: cholesterol acetyl-transferase and nucleic acid sequence encoding it - used to correct enzyme deficiencies and screen for enzyme inhibitors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= c
/note= "Putative polyadenylation signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coenzyme A: cholesterol acetyltransferase (ACAT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                           AAQ63212 standard; cDNA; 4011 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92US-0959950.
93US-0121057.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93WO-US09704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 13; Figure 9; 52pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DART-) DARTMOUTH COLLEGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1994-151312/18.
P-PSDB; AAR53079.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chang CCY, Chang T;
                                                                                                                                                                                                   CATACCTAG 1569
                                                                                                                                                                                                                                               672
                                                                                                                                                                                                                            CATACCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-OCT-1992;
10-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9409126-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                        AAQ63212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acetyl
                                                                                                                                                                                                   1561
                         1441
                                                                 544
                                                                                                            1501
                                                                                                                                                      604
                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ношо
                                                                                                                                                                                                                                                                                                                 RESULT 5
                                                                                                                                                                                                                                                                                                                                      AAQ63212
                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                      염
                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                               g
                       à
```

```
2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1101
                                                                                                                                                                                                                                                                                                                                                  1916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2275
                                                                                                                                                                          CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCGAGGGGTAGCCATGCTGGGTGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           861
                                                                                                                                                                                                                                                                                                                                                                                         526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       981
                                                                                                                                                                                                                                 347 AGGIGCAGCATTICCGCACCATCIACCACATGTICATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2217 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                922 GIGCICIAIGCCIGCIICAICCIGGGCCGCCICIGIGIICCIGICIIIGCCAACAIGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            982 CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2516 GIGCIGATICICITICCTIATTITICCCTITITICACCICACICCTITICCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                     287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                       407 TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                   527 CCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1977 CTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        749 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G------CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         862 AGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAGGACTTTGCCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGAGCCCTTCAGCGCTCGTGTTCTGGTCCTATGTGTATTTAACTCCATCTTGCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1042 ATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  587 CGACGGGCCTGGGCTGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2097 TTCTAGGTTTTGGACCAACATATGTTGTGTTAGCATATACACTGCCACCAGCTTCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                           467 TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                              26;
                                                                           Length
Κĭ
                                                                     Score 407.2; DB 15; Length.
Pred. No. 2.8e-91;
0; Mismatches 508; Indels
                                  Sequence 4011 BP; 1056 A; 793 C; 839 G; 1323 T; 0 other;
This sequence is a human ACAT cDNA sequence designated
                                                                         26.0%;
59.0%;
                                                                       Query Match
Best Local Similarity 59.0 Matches 768; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              647 TCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1162
```

7

'n

a ò q ò ç

ð 윤 ð

```
1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1222
                                             Matches
                                                                                                                                   1797
                                                                                                                                                                               1857
                                                                                                                                                                                                                           1917
                                                                 287
                                                                                                              347
                                                                                                                                                         407
                                                                                                                                                                                                      467
                                                                                                                                                                                                                                                  527
                                                                                                                                                                                                                                                                                               587
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                      g
                                                                                                              ö
                                                                                                                                   g
                                                                                                                                                       ò
                                                                                                                                                                             g
                                                                                                                                                                                                      ò
                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
          2755
                                                                                                                                                                     CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                          2936 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTCTGAAAATCCC 2995
                                                                           GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This nucleic acid molecule encodes human acylcoenzyme A:cholesterol acyltransferase (see AAW43409), or ACAT I. The invention relates to isolated nucleic acids (see AAV01533-55) coding for human and mouse acylcoenzyme A:cholesterol acyltransferase II and III (see acylcoenzyme A:cholesterol acyltransferase III and III (see AAW43406-08), also designated ACAT related gene products (ARCP) I and 2. These can be used to identify inhibitors useful in the treatment of atherosclerosis and hyperlipidaemia.
                                                                                                                                                                                                                                                                                                                                                                                    Acylcoenzyme A:cholesterol acyltransferase; ACAT I;
ACAT related gene product 1; ARGP-1; ARP-2; sterol esterification;
inhibitor; atherosclerosis; hyperlipidaemia; human; ss.
2696 AAGGACTTTCTCTGGTTTTTCTCCAAGAGTTCAAATCTGCTGCCATGTTAGCTGTTTT
                                                                                       CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTTTCTAGGCCAGGGAATC
                                                                                                                                    2876 CGGAAAAAGCCGGATTGGAATGTTCTGATGTGGACTTCTCTTTTCTTGGCAATGGAGTC
                                                      CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGGTTCTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA encoding acylcoenzyme A: cholesterol acyltransferase II
III - useful to identify inhibitors for treatment of
atherosclerosis or hyperlipidaemia
                                                                                                                                                                                                                                                                                                                                                                 î
                                                                                                                                                                                                                                                                                                                                                                Human acylcoenzyme A:cholesterol acyltransferase (ACAT
                                                                                                                                                                                                                ACTITCIGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                            Disclosure; Fig 5A 1-3; 121pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                              ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COLUMBIA NEW YORK
                                                                                                                                                                                                                                                                                              AAV01536 standard; DNA; 3649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96us-0657620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-US09460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1397..3049
/*tag= a
                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-032573/03.
P-PSDB; AAW43409.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYCO ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9745439-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAY-1996;
                                                                                                                                                                                                                                                                                                                                          08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SL;
                                                                                                                                                                                                                                                                                                                    AAV01536;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sturley
                                                                                                                                                                 1462 (
                                1282
                                                                           1342
                                                                                                 2816
                                                                                                                                                                                                                                      9662
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                         - 1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                          g
                                                                                                                                                                                                                                  g
```

```
1916
                                                                                                                                                                                                                                                                                                                                                                                                      1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2755
                                                                                                                                                  2396 TTTTTCTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAA 2455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGATGGGCTGCGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            921
                                                                                                                                                                                                     AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTTTATCA 406
                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2217 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2636 TCCAACTATTATAGAACCTGGAATGTGGTGCATGACTGGCTATATTACTATGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2696 AAGGACTTTCTGGTTTTTCTCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTT
                                                                                                                      CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                   TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                         TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1977 CTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           809 G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            862 AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2456 CAGGAGCCCTTCAGCGCTCGTGTTTTTAACTCCATCTTGCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1042 ATCTTCATGCTGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGACGGGCCTGGGCTGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCCGG
                                                                                                                                                                                                                                                                                                                                                                  TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTCTGT
                                                                            26;
                                        Length
Sequence 3649 BP; 929 A; 749 C; 781 G; 1190 T; 0 other;
                                      Score 404; DB 19;
Pred. No. 1.7e-90;
0; Mismatches 510;
                                        25.7%;
58.8%;
                                                                              766; Conservative
                                        Query Match
Best Local Similarity
```

4

à g ò 셤 ŏ g õ

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏλ
                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                          οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                   ò
ò
                                                                                                                                                                    g
                                                                                                                                                                                        δy
                                                                                                                                                                                                          g
                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                            ò
                             2815
                                                                     2875
                                                                                        1461
                                                 1401
                                                                                                                                          2936 TIACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTCTGAAAATCCC 2995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This DNA sequence includes a coding region for human macrophage acyl-coenzyme A:cholesterol acyltransferase I (hACAT) (see AAW38416) It has been used to search for homologous yeast genes (see AAT96369 and AAT96370) and subsequently to identify an additional human isoform (see AAW38421). A novel claimed expression vector (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             enzyme
                    2816 GIGCTGCTGCTCCTTCATGTTCTTTGGAATGGCTTTCAACTTCATTGTCAATGATAGT
                                                                                                   1462 CAGGICAGCCIGIACIGCCAGGAGIGGIACGCACGGCGGCACIGCCCCITACCCCAGGCA
           1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGGTTCTTCTATCCC
                                                  GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                        CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                             Yeast acyl:coenzyme A:cholesterol acyl:transferase related and II - useful to identify inhibitor for treatment of hyperlipidaemia, arteriosclerosis and fungal invasion
                                                                                                                                                                                                                                                                                                                      Acyl-coenzyme A: cholesterol acyltransferase I; ACAT; huma: sterol; esterification; arteriosclerosis; hyperlipidaemia; antifungal; fungicide; ss.
                                                                                                                                                                                                                                                                                                     Human acyl-coenzyme A:cholesterol acyltransferase I DNA
                                                                                                                                                                                  ACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 61-63; 111pp; English
                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1397..3050
                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYCO ) UNIV COLUMBIA NEW YORK. (INDV ) UNIV INDIANA FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yang H;
                                                                                                                                                                                                                                             DNA; 3650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96US-0657621.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97WO-US09160
                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sturley SL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-032644/03
                                                                                                                                                                                                                                             AAT96368 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; AAW38416.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W09745536-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                   21-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-DEC-1997.
                                                                                                                                                                                                                                                               AAT96368;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bard M,
                                                                                            1402
                                                                                                                                                                                            2996
                                                    1342
                                                                                                                                                                         1522
                                                                                                                                                                                                                                                                                                                                                                                      Key.
                                                                                                                                                                                                                          RESULT 7
                                                                                                                                                                                                                                   AAT96368
                                                                                                                                                                                                                                                                         g
                                                                                                                                                      용
                                                                                                                                                                         ò
```

```
1160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1917 TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT 1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGCACACTTGTAGTAGATTACATTGATGAAGGAAGGTGGTGGTTGAGTTCAGCCTCC 1916
                                                                                                                                                                                                                                                                                                                                                                         1737 CACCTCCAGAACAAGGAAAGATTTTATTGCAAGGCGCTCTCTTAGATGAACTGCTTG 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        921
                                                                                                                                                                                                                                                                                                                                                                                                                   AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 586
                                                                                                                                                                                                                                                                                                                                  287 CATCCCTGGGGAAACAGAAAGTTTTCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
comprises an isolated nucleic acid molecule encoding yeast wild type acyl-coenzyme A:cholesterol acyltransferase 1 (ARE1) (see AAW38417) or 2 (ARE2) (see AAW38418) operatively linked to a promoter. The vector and a claimed host-vector system can be used for the recombinant production of ARE1 or ARE2. The products can be used to identify novel ARE1 or ARE2 inhibitors. ARE2 inhibitors can be used to treat arteriosclerosis or hyperlipidaemia, as well as to inhibit fungal growth or to treat fungal invasion (claimed).
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2516 TGIGCTGATTCTCTTGCTTACTTTTTTGCCTTTTTGCACTGCTGCTGCTCAATGCCTTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAGATGCTACGATTTGGACACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        862 AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTA-TCCTGCATGCCACGTTGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACCCTGTTGGCGCCCTACCAGGCCCTACGGCTGTGGGGCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          689 GIGICCIGGICITCGAGCAGGITAGGITCCIGAIGAAAAGCIACICCTICCIGAGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTACATTTCAGTTCCCTATTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2037 CTCATCCGTGATCGTTGTTTCATGGTTGTTTCATGATGGAGTTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2097 ITCTAGGITTTGGACCAACATAIGTTGTGTTAGCATATACACTGCCACCAGCTTCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 749 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2217 ACGIGCCICGGGIACIAAAT-TCAGCIAAGGAGAAAICAAGCACIGIICCAAIACCIACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      809 G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGACGGGCCTGGGGCTGTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27;
                                                                                                                                                                                                                                                  DB 19; Length 3650;
                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                    Sequence 3650 BP; 929 A; 750 C; 781 G; 1190 T; 0 other;
                                                                                                                                                                                                                                                Score 394.6; DB 19;
Pred. No. 3.7e-88;
0; Mismatches 509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25.1%;
58.9%;
                                                                                                                                                                                                                                                                         Best_Local Similarity 58.9
Matches 767; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 647 TCC-----
                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           982
                                                                                                                                                                                                                                                                                                                                                                                                                              347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               587
```

σ

ö

Gaps

9

```
New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell interactions .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                    1435 ACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCA 1494
                                                                                                                                                                                                                                                                                                               CGGCGCCACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGG 1554
                                                                                                                                                                                                                                                                     relates to isolated nucleic acids (see AAV01533-35) coding for human and mouse acylcoenzyme A:cholesterol acyltransferase II and III (see AAW43406-08), also designated ACAT related gene products (ARGP) 1 and 2. These can be used to identify inhibitors useful in the treatment of atherosclerosis and hyperlipidaemia.
                                                                                                                                                                                       1375 ATGTTGAACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGG
                                                                                                                                                                                                       1 ATGITGAACTICATGATGCATGACCAGCGCACGGCCCGGCATGGAACGTGCTGATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster expressed polynucleotide SEQ ID NO 35759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               developmental biology; cell signalling; insecticide;
                                                                                                                                                          ö
                                                                                                                            Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 35759; 21pp + Sequence Listing; English
                                                                                                                                                           Indels
                                                                                              Sequence 455 BP; 95 A; 121 C; 123 G; 116 T; 0 other;
                                                                                                                            DB 19;
                                                                                                                           Score 191.8; DB 1 Pred. No. 5.8e-38;
                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA; 1885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PWD,
                                                                                                                            12.2%;
99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-MAR-2001; 2001WO-US09231.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                            TCCTGCCATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ľį
                                                                                                                                                          193; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                TCCTGCCATACCTAG 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila; developmen
pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-656860/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABL13759 standard;
                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; ABB69656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200171042-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-SEP-2001.
                                                                                                                         Query Match
Best Local S
                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                               1495
                                                                                                                                                                                                                                                                                                                                                                            1555
                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8X88888
                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                            à
 2576 TGAGATGTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTCCACGTCATA 2635
                                                                                                                                                                                                                      CGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCTGACGCA 1400
                                                2636 CTCCAACTATTATAGAACCTGGAATGTGGTGGTCCATGACTGGCTATATTACTATGCTTA
                                                                                                                                                                           2756 TGCTGTATCTGCTGTAGTACACGAATATGCCTTGGCTGTTTGCTTGAGCTTTTTCTATCC
                                                                                                                                                                                                                                    2936 CTTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTCTGAAAAATCC
                                                                                                                         2696 CAAGGACTITCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTTT
                                                                                                                                                        1281 CCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCC
                                                                                                                                                                                                                                                                                GCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAAT
                                CTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTA
                                                                                            1221 TCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTTT
                                                                                                                                                                                                                                                                                                                                            CCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This is a nucleic acid sequence of the invention. The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ^{\rm or}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA encoding acylcoenzyme A: cholesterol acyltransferase II III - useful to identify inhibitors for treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acylcoenzyme A:cholesterol acyltransferase partial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acylcoenzyme A:cholesterol acyltransferase; ARGP-1; ARGP-2; ACAT related gene product; sterol esterification; Inhibitor; atherosclerosis; hyperlipidaemia; ss.
                                                                                                                                                                                                                                                                                                                                                                                                           AACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                          2996 CACATTTTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGT 3038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 70; 121pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        atherosclerosis or hyperlipidaemia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COLUMBIA NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-US09460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-0657620.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV01545 standard; DNA; 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1..195
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-032573/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; AAW43413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYCO ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9745439-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sturley SL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV01545;
                                                                                                                                                                                                                                                                                1401
                                                                                                                                                                                                                                                                                                                                            1461
                                                                                                                                                                                                                                                                                                                                                                                                         1521
                                1161
                                                                                                                                                                                                                      1341
                                                                                                                                                                                                                                                 2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                   셤
                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                à
                                                                                          ò
                                                                                                                                                        ò
                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                         õ
```

8 × 6 6 6 6 6

ò 용 ò g Q

```
2000US-191637P.
2000US-0614150.
                                                                                                                                                                     23-MAR-2001; 2001WO-US09231
           (first entry)
                                                                                                                                                                                                                                                         ij
                                                                      pharmaceutical; gene; ss
                                                                                                                                                                                                                                                                                  WPI; 2001-656860/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 413; Conserv
                                                                                                                                                                                                                                (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                             P-PSDB; ABB71591
                                                                                                                    WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ
                                                                                                                                                                                                        11-JUL-2000;
                                                                                                                                                                                            23-MAR-2000;
                                                                                                                                            27-SEP-2001
                                                                                                                                                                                                                                                         JC,
                                                                                              Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                          Venter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ă
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δλ
                                                                                                         7;
 (ABB57737-ABB72072). The sequence data for this patent did not form part of the printed The sequence data for this patent did not format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGCGCCACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTG 1553
                                                                                                                                                                                                                                                                                                                                                                                                  CCTAAAGAACTGCAACCTAAGCAACGAGGTTGGACGTATCGCCTGCTGCCGGCGGTATG 1777
                                                                                                                                                                                                833
                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1601 IGCCTTGGTATTCCTAATGCGGAGTGCTCCAAAAGTGATGG---GCAACATCTTTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGC
                                                                                                                                                                                                                                                          GAATCGACTGTTGGAGGTGGTGGCCATAGCCTTCCTGTACGCGTTCATCCATGAGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCTTCGTCCTGGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGAGGGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1541 CGGCTTTGCCCTGCAAATGTTCTTCCCAGTGATGTTCTTCTTTTGGGGTCGTGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGT
                                                                                                                                 774 ACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTTCTTCTTCTGCCC
                                                                                                                                                                                                                                  CAAGAACTTTGCCCAGGCCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCT
                                                                                                                                                                                                                                                                                   CTGTGTTCCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCTGGTGCT
                                                                                                                                                                                                                                                                                                         CATCCACGAGCACTTCGGACAGTACGGACCGAACCAATGGGACCCTCCCAGCTGATCCT
                                                                                                                                                                                                                                                                                                                                  CICIAICCIGCAIGCCACGIIGCCAGGCAICIICAIGCIGCIGCICAICIITIIGCCII
                                                                                                                                                                                                                                                                                                                                                           CAAGCTGTTCGGCATGATGCTGCCCAGCGCGCTGATCTTTCTGTGCGGCTTCTACCTAAT
                                                                                                                                                                                                                                                                                                                                                                                  CCTCCATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGGACAGGATGTTCTA
                                                                                                                                                                                   AACACTCATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGC
                                                                                 Length 1885;
                                                                                                          Indels
                                                         Sequence 1885 BP; 410 A; 514 C; 504 G; 457 T; 0 other;
                                                                                Score 172; DB 23;
Pred. No. 8.5e-33;
0; Mismatches 380;
                                                                                   11.0%; Score 172; 51.9%; Pred. No. 8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard; cDNA; 2657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCGCTGCTACAATTAG 1793
                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCCTGCCATACCTAG
                                                                                                 Similarity
                                                                                                             Matches 413;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABL15694
                                                                                       Query Match
                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
ABL15694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1554
                                                                                                                                                           1001
                                                                                                                                                                                    834
                                                                                                                                                                                                                                                             1121
                                                                                                                                                                                                                                                                                                             1181
                                                                                                                                                                                                                                                                                                                                    1014
                                                                                                                                                                                                                                                                                                                                                            1241
                                                                                                                                                                                                                                                                                                                                                                                                            1301
                                                                                                                                                                                                                                                                                                                                                                                                                                     1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1254
                                                                                                                                                                                                                                      894
                                                                                                                                                                                                                                                                                                                                                                                     1074
                                                                                                                                                                                                                                                                                      954
```

ò g ŏ qq οy qq ŏ

g

g οy g ŏ В qq

ò g ö g ŏ 셤 δ ABL15694

XX II

```
specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell interactions - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTCCATTGCTGGCTCAACGCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL11840-ABL16175) and the encoded proteins (ABB572072).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTGTTCCTGTCTTTGCCAACATGAGCCGAGGCCCTTCAGCACCCGTGCCCTGGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              774 ACGAGGIGAGGGGAICCAGGCCCCCAGITICICCAGCIACCICIACTICCICITCIGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   834 AACACTCATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAGAACTTTGCCCAGGCCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAATCGACTGTTGGAGGTGGTGGCCATAGCCTTCCTGTACGCGTTCATCCATGAGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CICIAICCIGCAIGCCACGIIGCCAGGCAICTICAIGCIGCIGCICCAICTITIGCCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAAGCTGTTCGGCATGATGCTGCCCAGCGCGGTGATCTTTCTGTGCGGCTTCTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATCCACGAGCACTTCGGACAGTACGGACTGGAACCAATGGGACCCTCCCAGCTGATCCT
Drosophila melanogaster expressed polynucleotide SEQ ID NO 41564
                                                       developmental biology; cell signalling; insecticide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2657;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ID NO 41564; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2657 BP; 704 A; 610 C; 624 G; 719 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 172; DB 23;
Pred. No. 9.6e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₩,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.0%;
nilarity 51.9%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            485
```

15

ij

ä

```
The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell interactions -
                                                                                   1313
                                                                                                                             1373
                                                                                                                                                                      1433
                                                                                                                                                                                                                1493
  1193
                                          1253
                                                              664
                                                                                                                                                 784
                                                                                                                                                                                          841
                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                             961
                                                                                                                                        GACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGC
                                                                                                                                                                                                                             ACGCCCCCACTCCCCTTACCCCACCCATTTCTCGCCCTCCTGCTCACCTCCTTC
 CCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGT
                                          CCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGC
                                                                                                                            CTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGG
                                                                                                                                                                      AATGTTGAACTTCATGATGCATGACCAGCGCCCGGCCTGGAACGTGCTGATGTG
                                                                                                                                                                                                                                                                     545 CAAGGACTGGTGGACGTCGCACATTACGATGGCTACTACAGAACTGGAATGTCGTCGT
                                                     CAAGGTGGCCGCCTCGCTGGCAGTGTTCATGATCTCCGCTGTGGTCCATGAGCAGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                         polynucleotide SEQ ID NO 35756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID NO 35756; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              developmental biology; cell signalling;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster expressed
                                                                                                                                                                                                                                                                                                                                                                           BP.
                                                                                                                                                                                                                                                                                                                                                                          ABL13758 standard; cDNA; 4260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-MAR-2000; 2000US-191637P
11-JUL-2000; 2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                  GTCCTGCCATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                              GCGCTGCTACAATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-656860/75.
P-PSDB; ABB69655.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila;
                                                                                                                                                                                                                                                                                                                                                                                                                     26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                              ABL13758;
                                                                                                                                                 725
 1134
                                                                                                                                                                      1374
                                                                                                                                                                                                                                                        1494
                                         1194
                                                                                                        665
                                                                                                                                                                                          785
                                                                                                                                                                                                               1434
                                                                                                                                                                                                                                                                                                                                                      RESULT 11
ABL13758
                                                                                   1254
                                                                                                                                                                                                                                    842
                                                                                                                                                                                                                                                                            902
                                                                                                                                                                                                                                                                                                 1554
                                                                                                                                                                                                                                                                                                                       962
                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                           qq
                                                                                                                                                                    ò
                                                                                                                                                                                       g
                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                    g
ò
                    g
                                          ç
                                                           g
                                                                                ò
                                                                                                                           å
```

```
(ABBS7737-ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                          2495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1553
     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CIGCTICGFCCTGGGGTICTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGG 1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTAAAGAACTGCAACCTAAGCAACGAGAGTTGGACGTATCGCCTGCTGCCGGCGGTATG 3152
                                                                                                                                                                                                                                                                                          Gaps
useful in developmental biology and in elucidating cell signalling cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLi6176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTGTTCCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCTATCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTTGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTCCATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTTGGAGACAGGATGTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGCACTCGTGGCTGAACTTCACGTCGGAGCTGCTACGCTTCGGTGATCGTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGAGGGGTAGCCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCCATGAGTATATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1374 AATGTTGAACTTCATGATGCATGACCAGCGCACGGCCCGGCATGGAACGTGCTGATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCCTTGGTATTCCTAATGCGGAGTGCTCCAAAAGTGATGG---GCAACATCTTTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGCGCCACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTG
                                                                                                                                                                                                                                                              774 ACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTACTTCCTCTTCTGCCC
                                                                                                                                                                                                                                                                                                                            AACACTCATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGC
                                                                                                                                                                                                                                                                                                                                                                                          CAAGAACTTTGCCCAGGCCCTGGGATGTGTGTCTATGCCTGCTTCATCCTGGGCCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                         GAATCGACTGTTGGAGGTGGTGGCCATAGCCTTCCTGTACGCGTTCATCCATGAGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAGGACTGGTGGACGTCGCACACTTACGATGGCTACTACAGAAACTGGAATGTCGTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTTCGTTGGTGCCCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTTCTCTCTGATCCTGGGAAATGCCACGCTGATCTCACTATACGCCATGGAGCATTACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCCACGAGCACTTCGGACAGTACGGACTGGAACCAATGGGACCCTCCCAGCTGATCCT
                                                                                                                                                                                                                              3;
                                                                                                                                                                                              Length 4,260;
                                                                                                                                                                                                                              Indels
                                                                                                                                                              0 other;
                                                                                                                                                                                            Score 172; DB 23;
Pred. No. 1.2e-32;
0; Mismatches 380;
                                                                                                                                                               Sequence 4260 BP; 1152 A; 961 C; 962 G; 1185 T;
                                                                                                                                                                                              Query Match
Best Local Similarity 51.9%;
Matches 413; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGCTGCTACAATTAG 3168
                                                                                                                                                                                                                                                                                                                                                                                                                         2496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3093
                                                                                                                                                                                                                                                                                                                                                                                         894
                                                                                                                                                                                                                                                                                                                                                                                                                                                         954
     δ
                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ōλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

AAQ63210

```
502 TGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGA 561
                                                 584 AGGCGACGGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1..660
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAV01539 standard; cDNA; 983 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYCO ) UNIV COLUMBIA NEW YORK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-US09460.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             986 AGCCCTTCAGCACCC 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-032573/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAW43412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W09745439-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-DEC-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sturley SL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV01539;
                                                                                                                                                        634
                                                                                                                                                                                                                                                            691
                                                                                                                                                                                                                                                                                                                                                           751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV01539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                       δλ
                                                                                                   pp
                                                                                                                                                        δλ
                                                                                                                                                                                                     QQ
                                                                                                                                                                                                                                                            Ôγ
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    347 AGGIGCAGCATTICCGCACCATCTACCACATGITCAICGCTGGCCTGTGTGTCTTCAICA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGC 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262 CACCTCCAGAACAAGGAAAGATTTTATTGCAAGGCGCTCTCTTTAGATGAACTGCTTG 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                322 AAGTGGACCACATCAGAACAATATATCACATGTTTATTGCCCTCCTCATTCTCTTTATCC 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442 CCTGTCTTATGCATTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCC 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The acetyl coenzyme A: cholesterol acetyl-transferase (ACAT) gene sequence enables the screening of human populations for abnormal human ACAT activities for disease diagnosis. It provides information concerning the catalytic mechanism of ACAT and allows the design of drugs serving as specific ACAT inhibitors, desirable for the prevention and/or treatment of human hypercholesterolaemia and human atheroselerosis. It also allows the design of antisense DNAs or RNAs to inhibit ACAT prodction, or probes to identify different forms of human ACAT or ACAT from different animal species. This sequence is a human ACAT clone designated Cl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGG--AGTTTGACCT
                                                                                                                                                                                                                                                               ACAT; disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Acetyl coenzyme A: cholesterol acetyl-transferase and nucleic acid sequence encoding it - used to correct enzyme deficiencies and screen for enzyme inhibitors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 8.6%; Score 134.6; DB 15; Length 996; Similarity 53.1%; Pred. No. 1.4e-23; 90; Conservative 0; Mismatches 324; Indels 21;
                                                                                                                                                                                                                                                         Acetyl coenzyme A; cholesterol acetyltransferase; ACAT; c
diagnosis; detection; screening; treatment; prophylaxis;
hypercholesterolaemia; atherosclerosis; antisense; probe;
                                                                                                                                                                                                               Acetyl coenzyme A: cholesterol acetyltransferase (ACAT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 996 BP; 258 A; 219 C; 207 G; 312 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 13; Figure 3; 52pp; English.
                                                         AAQ63210 standard; cDNA; 996 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92US-0959950
93US-0121057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93WO-US09704
                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (DART-) DARTMOUTH COLLEGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chang T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1994-151312/18.
                                                                                                                                                                                                                                                                                                                                           ldentification; ss.
                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-OCT-1992;
10-SEP-1993;
                                                                                                                                                                03-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9409126-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 390;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chang CCY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                              AAQ63210;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sest Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        407
             RESULT 12
```

δλ Ω δ g δ qq ò

ò g

```
750
                                                                                                                                                                                                                                     802
                                                                                                                                                                                                                                                                                                                                                                       861
                                                                                                                                                                                                                                                                                                                                                                                                                  925
                                                                                                                                                                                        741
  621
                                                                                             681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acylcoenzyme A:cholesterol acyltransferase; ACAT I;
ACAT related gene product 1; ARCP-1; ARP-2; sterol esterification;
inhibitor; atherosclerosis; hyperlipidaemia; human; ss.
                                                                                                                                                                     GTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                    CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG
                                                  ---TGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTTGT
                                                                                             622 GAGITCTAGGITTIGGACCAACATATGITGIGITAGCATATCCTGCCACCAGCITCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human acylcoenzyme A:cholesterol acyltransferase II (ACAT II) DNA
                                                                                                                                                                                                                                                                                                                              806 CCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA encoding acylcoenzyme A: cholesterol acyltransferase II or III - useful to identify inhibitors for treatment of atherosclerosis or hyperlipidaemia
```

```
20000S-217496P.
20000S-218290P.
20000S-220964P.
20000S-224964P.
20000S-224518P.
                                                                                                                                                                                                                                                                                      2000US-225213P
2000US-225214P
2000US-22526F
2000US-22526F
2000US-22526P
2000US-225270P
2000US-22547P
2000US-225475P
2000US-225757P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-225759P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-231413P
2000US-231414P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-232080P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-232397P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-232401P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-233064P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-233065P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-234223P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-234998P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-236369P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-236370P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-234997P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-235836P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-236802P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-241221P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-SEP-2000;
25-SEP-2000;
27-SEP-2000;
27-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
                                                                                                                                                                                                                                                                                                                                      14 - AUG - 2000;
14 - AUG - 2000;
14 - AUG - 2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                  14-AUG-2000;
14-AUG-2000;
14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-SEP-2000;
29-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-OCT-2000;
20-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-SEP-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-SEP-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-OCT-2000;
02-OCT-2000;
                                                                                                                                                                                                                                          14-AUG-2000;
                                                                                                                                                                                                                                                                                        14-AUG-2000;
14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                4-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-AUG-2000;
22-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-AUG-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-SEP-2000;
06-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-SEP-2000;
12-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-AUG-2000;
  ***********************
                                                                                                                                                                                                                                                                                                                                                                  Τ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1318
                                                                                                                                                                                                                                                                                                                                                                                                             1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1079 ATTGCTGGCTCAACGCCTTTGCCCAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1139 ACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATG 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGGCTCCTTGGTGCCCGGGCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          416 GGATGGCCAGGACAGGGGTGTTCCTGGCCTTGGCTTTCTTCCACGAGTACCTGGTGAGGG 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                    This nucleic acid molecule encodes human acylcoenzyme A:cholesterol acyltransferase I (see AAW412), or ACAT II. The invention relates to isolated nucleic acids (see AAW01533-35) coding for human and mouse acylcoenzyme A:cholesterol acyltransferase II and III (see AAW43406-08), also designated ACAT related gene products (ARGP) 1 and 2. These can be used to identify inhibitors useful in the treatment of atherosclerosis and hyperlipidaemia.
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    muscular disorder; reproductive disorder; gastrointestinal disorder; pulmonary disorder; cardiovascular disorder; renal disorder; proliferative disorder; inflammation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                         242 ACTCCTGCCTGAATGCCGTGGCTGAGCTCATGCAGTTTGGAGACCGGGAGTTCTACCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302 ACTGGTGGAACTCCGAGTCTGTCACCTACTTCTGGCAGAACTGGAACATCCCTGTGCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCCATGAGTATATCTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            362 AGTGGTGCATCAGACACTTCTACAAGCCCATGCTTCGAC-----GGGGCAGCAAGT
                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; gene therapy; neural disorder; immune system disorder;
                                                                                                                                                                                                                                                                                                            6.1%; Score 95; DB 19; Length 983; 58.7%; Pred. No. 1e-13; tive 0; Mismatches 125; Indels
                                                                                                                                                                                                                                                                 Sequence 983 BP; 193 A; 314 C; 263 G; 213 T; 0 other;
                      Disclosure; Page 68; 121pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABA06413 standard; cDNA; 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-189874P.
2000US-190076P.
2000US-198123P.
2000US-205515P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-JAN-2001; 2001WO-US01349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :000US-180628P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-184664P
2000US-186350P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1319 TCGTCCTGGGGTTCTTC 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    476 TCCCTCTGCGAATGTTC 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 58.7
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human cDNA SEQ ID NO: 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200154474-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-MAR-2000;
18-APR-2000;
19-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-JAN-2000;
04-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-FEB-2000;
02-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABA06413;
                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
ABA06413/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              x_0 \times x_0 
                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                   å
```

;

Gaps

9

Length 993;

```
ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                        GGGTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCT 1318
                                                                                                                                1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                   1139 ACTGGTGGAACTCCAACGTCCTTCTCCAACTACCGCACTTGGAACGTGGTGGTCCATG 1198
                                                                                                                                                                                                    1079 ATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                        546 GGATGGCCAGGACAGGGGTGTTCCTGGCCTCGGCCTTCTTCCACGAGTACCTGGTGAGCG 487
                                                                                                                                                      DNA encoding acylcoenzyme A: cholesterol acyltransferase II or III - useful to identify inhibitors for treatment of atherosclerosis or hyperlipidaemia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acylcoenzyme A:cholesterol acyltransferase II; ARGP-1; ACAT related gene product 1; human; sterol esterification; inhibitor; atherosclerosis; hyperlipidaemia; ss.
                                                              Query Match
6.1%; Score 95; DB 22; Length 99
Best Local Similarity 58.7%; Pred. No. 1e-13;
Matches 186; Conservative 0; Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human acylcoenzyme A:cholesterol acyltransferase II DNA
                                Sequence 993 BP; 218 A; 260 C; 328 G; 186 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1..1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 5; Fig 15A-B; 121pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV01533 standard; DNA; 1521 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYCO ) UNIV COLUMBIA NEW YORK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97WO-US09460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96US-0657620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1319 TCGTCCTGGGGTTCTTC 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            486 rccrcrcrcccaargrrc 470
is a cDNA of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-032573/03.
P-PSDB; AAW43406.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9745439-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sturley SL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV01533;
                                                                                                                                                                                                                                                                                                                                            1199
                                                                                                                                                                                                                                                                                                                                                                                                             1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
     SXS
                                                                                                                                                                      a
                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention provides human cDNAs, proteins and related genomic DNAs. These can be used in the treatment of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders and inflammation. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Isolated nucleic acid molecule encoding an inflammation-associated polypeptide is used in preventing, treating or ameliorating a medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID NO: 79; 859pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-476161/51.
P-PSDB; ABB10191.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JAN-2001;
                                                     20-OCT-2000;
20-OCT-2000;
20-OCT-2000;
01-NOV-2000;
08-NOV-2000;
                                                                                                                                                                          08-NOV-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-DEC-2000;
08-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-DEC-2000:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-DEC-2000;
                                                                                                                                                                                                                                                                                                              -NOV-2000;
-NOV-2000;
-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -DEC-2000
-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-DEC-2000
                                                                                                                                                             NOV-2000
                                                                                                                                                                                                                             08-NOV-2000
08-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -NOV-200
                                                                                                                                                                                                                                                                                                                                                                                      NOV-200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -NOV-200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       condition
```

```
Archolesterol acyltransferase II (see AAM43406), or ACAT related gene product 1 (ARGP-1), that is expressed at high levels in intestine and is a candidate for sterol esterification in these tissues. It was identified following database searching for human ARGP-2 (see AAM43407) and isolated nucleic acid (see AAV01334) for human ARGP-2 (see AAW43407) considered nucleic acid (see AAV01334) for human ARGP-2 (see AAW43407) considered nucleic acid (see AAV01334) for human ARGP-2 (see AAW43407) considered nucleic acid see AAV01334) for human ARGP-2 (see AAW43407) considered nucleic acid see AAV01334) for human ARGP-2 (see AAW43407) considered nucleic acids can be used to diagnose or treat a considered nucleic acids can be used to a diagnose or treat a considered nucleic acid molecule, or a vector expressing the considered nucleic acid molecule, or a vector expressing the considered nucleic acid molecule, or a vector expressing the considered considered to inhibit wild-type ARGP-1 or ARGP-2 (in the treatment of atherosclerosis or hyperlipidaemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1199 ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1259 GGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCT 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1139 ACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATG 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   905 AGTGGTGCATCAGACACTTCTACAAGCCCATGCTTCGAC-----GGGGCAGCAGCAAGT 958
                           This isolated nucleic acid molecule encodes human acylcoenzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 6.1%; Score 95; DB 19; Length 1521; Best Local Similarity 58.7%; Pred. No. 1.2e-13; Matches 186; Conservative 0; Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1521 BP; 277 A; 489 C; 412 G; 343 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               completed: April 30, 2003, 13:20:03 e : 292 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1319 TCGTCCTGGGGTTCTTC 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1019 TCCCTCTGCGAATGTTC 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Search cor
Job time
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

(OTAZU) XWAJB 32A9 CIH.

Appli Appli

nucleic

Run on:

Sequence:

Title: Perfect :

Searched:

Minimum

```
121 TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTCTGCCCCCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 CAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTCTTCATCATCAGCACCCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAGCCAGGCGCGCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG
                Sequence 3
Sequence 1
Sequence 1
Sequence 1
Sequence 2
Sequence 2
                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2040;
                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4, Application US/09165042
Patent No. 6100077
EQUERAL INFORMATION:
APPLICANT: Sturley, Stephen L.
APPLICANT: Oelkers, Peter
TITLE OF INVENTION: ISOLATION OF A GENE ENCODING DIACYLGLYCEROL
TITLE OF INVENTION: ACTLTRANSFERASE
FILE REFERENCE: 0575/56331
CURRENT APPLICATION NUMBER: US/09/165,042
CURRENT APPLICATION DATE: 1998-10-01
NUMBER OF SOF ID NOS: 32
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 3;
           US-08-439-009A-3
PCT-US92-0828-1
PCT-US92-0828-1
US-09-007-005-17
US-09-244-796-17
US-08-666-392A-2
US-09-199-926-2
US-09-114-085-3
US-08-125-468-1
US-08-125-468-1
US-08-125-468-1
US-08-125-468-1
US-08-105-537-23
US-09-105-537-3
US-09-105-537-3
US-09-461-697-193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1564.2;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 99.8%;
Matches 1566; Conservative
20235
20235
1469
2459
2474
2474
33529
30001
30001
2430
2430
2430
2430
2430
269
699
 ; ORGANISM: Yeast
US-09-165-042-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEO ID NO 4
LENGTH: 2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ογ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Óγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ογ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Appl
Appl
Appl
Appl
Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Appl
Appli
                                                                                                                          (without alignments)
9078.789 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2
Sequence 2
Sequence 2
Sequence 1
Sequence 1
Sequence 1
Sequence 2
Sequence 2
Sequence 2
Sequence 2
Sequence 2
Sequence 2
Sequence 1
Sequence 1
Sequence 1
Sequence 1
Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                         1 atggagccaggcgggggcccg......cttggtcctgccatacctag
                                                                                                         April 30, 2003, 13:13:06; Search time 53 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/pcvu5_COMB.seq:*
/cgn2_6/ptodata/1/ina/pcvu5_COMB.seq:*
              5.1.4_p5_4578
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5-09-326-203A-14
5-09-165-042-2
5-09-103-754A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT-US93-09704A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US93-09704A-2
US-08-121-057-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-326-203A-15
US-09-326-203A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -09-326-203A-11
-09-326-203A-1
                                                                                                                                                                                                                                                                                                                   hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US93-09704A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-121-057-2
US-08-509-187D-2
US-09-121-396-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-509-187D-1
US-09-121-396-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-121-057-3
US-08-509-187D-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -09-103-754A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JS-09-121-396-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-110-517-3
US-08-242-677-1
                                                                                                                                                                                                                                                                                     441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                GenCore version
Copyright (c) 1993 - 2003
                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                             nucleic search, using sw model
                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                    DB seq length: 0
DB seq length: 200000000
                                                                                                                                                            US-09-918-026A-3
1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2040
44011
44011
44011
10079
9966
9966
9966
11895
11976
11976
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
11766
1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match
                                                                                                                                                                                                                                                                                                                      of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1564.2
405.6
405.6
405.6
405.6
359.8
359.8
359.8
359.8
134.6
134.6
134.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ĉ æ. æ.
                                                                                                                                                                                          score:
                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                    Potal number
```

Result No.

ö

360

411

300 351 420

```
CACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGC
                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic acid
                                                             1612 CATACCTAG 1620
                                                1561 CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                    BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: 11
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                 ZIP: 02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; NAME/KEY:
; LOCATION:
US-08-121-057-3
                                                                                                                                                                                                                                                ΜA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Simi
Matches 767;
                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                               STATE: M. COUNTRY:
                                                                                                             US-08-121-057-3
                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           467
        1501
                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
        ŏ
                            g
                                                 ŏ
                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CIGITICIAGGCCAGGGAAICCAGGICAGCCIGIACTGCCAGGAGIGGIACGCACGGCGG 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCCGGGCCCGAGGG 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCCTGGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACTICATGATGCATGACCAGGGCACCGGCCTGGAACGTGCTGATGTGGACCATG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1492 CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTAGTACGCAGGGGG 1551
                                                                                                                                                                                                                                                                                                                                                                                                                  1071
                                                                                                                                                                                                                                                                                                                                                      096
                                                                                                                                                                                                                                                                                                                                 951
                                                                                                                                                                                  720
                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                     840
                                                                                591
                                                                                                   900
                                                                                                                       651
                                                                                                                                           99
                                                                                                                                                               711
                                                                                                                                                                                             831
                                                                                                                                                                                                                                                                                       891
                                                                                                                                                                                                                                                                    1192, IGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCATGAGTATATCTTCTGCTTC
                                                                                                                                                                                                                                                                                                                                                                CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                                                                                                                      TITICCCCAGGCCCTGGGATGTGTGTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
412 CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTTTCATCATCACCACCCTGGCC
                                                                      GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                             TGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                      GAGCATCAGCTCCCGCCGCCTCCCGTTGTGTCCTGGTCTTCGAGCAGGTTAGGTTCCTG
                                                                                                                                                                                                                                      841 ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAAC
                              GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                            ATGAAAAGCTACTTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                                   CCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGGCGACGGGCCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1432
                                                                                                                                                                                                                                                                                                                                                                                                                     1012
                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1132
                                         472
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1072
                                                                                  532
                                                                                                                                                                652
                                                                                                                                                                                      661
                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                  772
                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                    892
                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                      541
                                                                                                                         592
                                                                                                                                                                                                         712
                                                              181
                                                                                                                                             601
                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                         a
                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                            g
  g
                       ò
                                       g
                                                              ò
                                                                                  원
                                                                                                      ò
                                                                                                                        g
                                                                                                                                              ò
                                                                                                                                                                g
                                                                                                                                                                                      ŏ
```

```
1552 CACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACCACCTCGATCTTGGTCCTGC 1611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGIGCAGCATITCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGATCTTCAGGTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 4011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .1e-94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 405.6;
Pred. No. 1.16
                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: ACYL COENZYME A:
TITLE OF INVENTION: ACYLTRANSFERASE (NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: LAMFORT HAMMITTE, ANN.
REGISTRATION NUMBER: 34,858
REFERENCE/DOCKET NUMBER: DCI-033CP
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                        510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/121,057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                   E: LAHIVE & COCKFIELD 60 STATE STREET, SUITE
                                                                                                                                                                                                                                                     APPLICANT: CHANG, TA-YUAN
APPLICANT: CHANG, CATHERINE C. Y.
                                                                                                                                                                                            Sequence 3, Application US/08121057 Patent No. 5484727 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (617) 227-2700
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25.9%;
58.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 4011 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
1397..3046
```

```
Similarity
                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                            02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; NAME/KEY:
; LOCATION:
US-08-509-187D-3
                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2456 CAGGAGCCCTTCAGCGCTCGTGTTTTTTAACTCCATCTTGCCAGGT 2515
                                                                                                                                                                                                                                                                                                                                                                                            2336 AGGAATCCCACTGTAAGATGGGGTTATGTCGCTATGAAGTTTGCACAGGTCTTTGGTTGC 2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGACTCAACGTCCTTC 1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2636 TCCAACTATTATAGAACCTGGAATGTGGTGCACCATGACTGGCTATATTACTATGCTTAC 2695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2696 AAGGACTTTCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTT 2755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2936 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTCTGAAAAATCCC 2995
1917 TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT 1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2276 GICAACCAGIAITIGIACIICITAITIGCICCIACCIITAICIACCGIGACAGCIAICC 2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2396 TTTTCTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAA 2455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1042 ATCTTCATGCTGCTGCTCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT 1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCAGGGGGTAGCCATGCTGGGGTGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGGTTCTTCTATCCC 1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1342 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1462 CAGGICAGCCIGIACIGCCAGGAGIGGIACGCACGGCGCCACTGCCCCTIACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                        748
                                                                                                                                                                                                                                 2097 ITCTAGGTTTTGGACCAACATATGTTGTGTTAGCATATACACTGCCACCAGCTTCCCGGT
                                                                                                                                                               2037 CTCATCCGCTGATCCGTTCTCTTCCATGGCTTTCTTTTCATGATCTTCCAGATTGGAG
                                                                                                                                                                                                                                                                                      TCATCATTATATTCGAGCAGATTCGTTTTGTAATGAAGGCCCCACTCATTTGTCAGAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2756 GCTGTATCTGCTGTAGTACACGAATATGCCTTGGCTGTTTGCTTGAGCTTTTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1402 CGCACCGGCCTGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                          CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                     CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTGTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2816 GIGCTGTTCGTCCTCTTCATGTTTTGGAATGGCTTTCAACTTCATTGTCAATGATAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGAGTT
                                                                                                                         CGACGGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                         ----ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2996 ACATTTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGT 3037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTITCTGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                1977
                                                                                                                                                                                                                                                                                                                            2157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               982
                                        527
                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                        ò
                                                                                                                                                           qq
                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
1917 TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT 1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1977 CTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGAGTT 2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            347 AGGIGCAGCATITCCGCACCATCTACCACATGTICATCGCTGGCCTGTGTGTTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287 CATCCCTGGGGAAACATTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        587 CGACGGCCTGGGCTGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4011;
                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC'DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURREWY APPLICATION DATA:
APPLICATION NUMBER: US/08/509,187D
FILING DATE: 31-JUL-1995
CLASSIFICATION: 435
                                                                           Catherine C. Cholesterol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1e-94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25.9%; Score 405.6; 58.9%; Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: DCI-033cpdv
                                                                   APPLICANT: Chang, Ta-Yuan and Chang,
TITLE OF INVENTION: ACYL Coenzyme A:
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD, LLP
STREET: 28 State Street
Sequence 3, Application US/08509187D Patent No. 5834283
                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Lamport Hammitte, REGISTRATION NUMBER: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 4011 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 767; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1397..3046
                                                                                                                                                                                                                         CITY: Boston
STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
```

ë

```
qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2636 TCCAACTATTATAGAACCTGGAATGTGGTGGTCCATGACTGGCTATATTACTATGCTTAC 2695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2696 AAGGACTITCICIGGITITICICCAAGAGATICAAAICTGCIGCCAIGITAGCIGICITI 2755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CIGGICICCGCAGIGGCCCAIGAGIAIATCTICIGCTICGICCIGGGGTICTICTAICC 1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGTGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1462 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTC 1281
                                                                                                                                             GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC 1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT 1221
                                                                                                                                                                                                                                                                                                                                           921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2276 GICAACCAGIAITIGIACTICITATITGCICCIACCCITATCIACCGIGACAGCIAICCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2456 CAGGAGCCCTTCAGCGCTCGTGTTCTGGTCCTATGTGTATTTAACTCCATCTTGCCAGGT
                                                                                                                                                                                                                                                                                                                                             AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                    GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1042 ATCTICATGCTGCTGCTCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                        2037 CICATCCGCTGATCCGTTCTTCTTTTTTTTTTTTTTTTCATGATTGGAGTTGGAG
                                                                                                                      G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                 ----ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                            CTGTGCCTGGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1522 ACTITCIGGGGGCIGGIGACACCICGAICIIGGICCIGCCAI 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      647 TCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1222
                                                                                                                                                              2157
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2396
                                                                                                                           689
                                                                                                                                                                                                  749
                                                                                                                                                                                                                                                                          809
```

oy Dp

g

ò

Oy Oy

g &

oy Oy Db Oy Db

ò

ò

```
2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TICTAGGITITIGGACCAACATAIGITGTGTTAGCATATACACTGCCACCAGCTTCCCGGT 2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1737 CACCICCAGAACAAGGATTTTTATTGCAAGGCGCTCTCTTAGATGAACTGCTTG 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          347 AGGIGCAGCATITCCGCACCATCTACCACATGITCATCGCTGCTGTGTGTTCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAICTICAGCIICGGACAGCIGCCAITGGCGCTGGIGACCIGGGIGCCCAIGIITCIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1917 IGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGACGGGCCTGGGGCTGTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCC-------ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 405.6; DB 2;
Pred. No. 1.1e-94;
0; Mismatches 509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATIONALY TO THE TANDER IN THE TANDER IN THE TANDER THANKITTE, ANN.

REGISTRATION NUMBER: 34,858

REGISTRATION NUMBER: DCI-033CPDV

TELEPANOE, (617) 227-2700

TELEPANOE: (617) 227-2700

TELEPANOE: (617) 742-4214

INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS:
LENGTH: 4011 Dase pairs

TYPE: nucleic acid

STRANDEDNESS: single
APPLICANT: CHANG, CATHERINE C.Y.
TITLE OF INVENTION: ACYL COENZYME A:
TITLE OF INVENTION: ACYLTRANSFERASE (
NUMBER OF SEQUENCES: 9
                                                                                                                                                                                                                                                                                                        SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/121,396
                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/509,187
FILING DATE: 07/31/95
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                       E: LAHIVE & COCKFIELD 28 STATE STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 25.9
Best Local Similarity 58.9
Matches 767; Conservative
                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linea
                                                                                                                                                                                          USA
                                                                                                                                                    BOSTON
                                                                                                                                                                                                                                                                                                                                                                              FILING DATE
                                                                                                                                                                                                         ZIP: 02109
                                                                                                                                                                         ΜA
                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-121-396-3
                                                                                                                                                                                          COUNTRY:
                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            587
```

e,

689 GIGICCICGICTICGAGCAGGITAGGITCCIGAIGAAAAGCIACTCCITCCIGAGAGG

Sequence 3, Application US/09121396 Patent No. 5968749 GENERAL INFORMATION:

RESULT 4 US-09-121-396-3

g

g

ŏ

do Qy

```
Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                 2515
                                                                                                                                                                                                                                                                                                                                                                                              2575
                                                                                                                                                                                                                                                                                                                                                                                                                           1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2816 GTGCTGTTCGTGCTCTTCATGTTCTTTGGAATGGCTTTCAACTTCATTGTCAATGATAGT 2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2995
CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCAGGGGGTAGCCATGCTGGGTGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC 1341
                                                                                                           861
                                                                                                                                                                                                                                      981
                                                                2276 GTCAACCAGTATTGTACTTCTTATTTGCTCCTACCCTTATCTACCGTGACAGCTATCCC
                                                                                                                                                                                                                                                     2396 TTTTCTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAA
                                                                                                                                                                                                                                                                                                                  2456 CAGGAGCCCTTCAGCGCTCGTGTTTTGGTGTATTTAACTCCATCTTGCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2636 TCCAACTATTATAGAACCTGGAATGTGGTGCTCCATGACTGGCTATATTACTATGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2696 AAGGACTTTCTCTGGTTTTTCTCCAAGAGTTCAAATCTGCTGCCATGTTAGCTGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2876 CGGAAAAGCCGATTTGGAATGTTCTGATGTGGGACTTCTTTTCTTGGGCAATGGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1462 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCCACTGCCCCTTACCCCAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2936 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTGAAAAATCCC
                                                                                                                                                                         AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                 CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                              1042 ATCTTCATGCTGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                               GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                            2576 GAGATGTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTCCACGTCATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                           G-----CTACCTCTTCCTCTTCTGCCCAACACTCTTCTACAGGAGACTTACCCT
                                                                                                                                                                                                                                      GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                              CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTITCIGGGGGCTGGTGACACCTCGATCITGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: ACYL COENZYME A: CHOLESTEROL TITLE OF INVENTION: ACYLTRANSFERASE (ACAT) NUMBER OF SEQUENCES: 9
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII Text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 3, Application PC/TUS9309704A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
PCT-US93-09704A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                       862
                                                                                                                                                                                                     2336
                                                                                                                                                                                                                                                                                                                                                                                                                           1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1402
                                                                                                           808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1522
                                                                                                                                                                                                                                    922
                                                                                                                                     쉽
                                                                                                                                                                                                  a
                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
              8
                                            ò
                                                                          g
                                                                                                       ŏ
                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                             ò
```

```
2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2157 TCATCATTATATTCGAGCAGATTCGTTTTGTAATGAAGGCCCACTCATTTGTCAGAGAG 2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1737 CACCTCCAGAACAAGGAAAGATTTTTATTGCAAGGCGCTCTCTTTAGATGAACTGCTTG 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTAGGTTTTGGACCAACATATGTTGTTAGCATATACACTGCCACCAGCTTCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         347 AGGIGCAGCATITCCGCACCATCIACCACAIGTTCATCGCTGGCCTGTGTCTTCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGCACCCTGGCCATCGACTTCATTGATGAGGCCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGACGGGCCTGGGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GIGICCIGGICTICGAGCAGGITAGGTTCCTGATGAAAAGCTACTCCTTCCTGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2217 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCC....-ACGTGGCCGTGGACATCAGCTCCCGCCGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 4011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 1.1e-94;
0; Mismatches 509;
                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5;
                                                                                     NO. 959,950
                                                                                                                     121,057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 405.6;
                PCT/US93/09704A
                                                                                                                                                                                                                 DCI-033CP
                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. SER. NC
FILING DATE: October 14, 1992
APPLICATION NUMBER: U.S. SER. NC
FILING DATE: September 10, 1993
ATTORNEY/AGENT INFORMATION:
                               October 12, 1993
                                                                                                                                                                        LAMPORT HAMMITTE, ANN. RATION NUMBER: 34,858
                                                                                                                                                                        NAME: LAMPORT HAMMITTE, ANN REGISTRATION NUMBER: 34,856 REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INPORMATION
                                                                                                                                                                                                                                             TELEPHONE: (617) 227-2700
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 25.9%;
Best Local Similarity 58.9%;
Matches 767; Conservative
                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 4011 base pairs
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                        nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                           ; MOLECULE TYPE: CDNA PCT-US93-09704A-3
                                                                                                                                                                                                                                                                                                                                                                          linear
                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -qa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
```

ñ

염

ð

g δ g

ò

g ò 셤 δ ద ð g ŏ 셤 ò

```
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                      ά
                                                                                                                                                                                                                                                                                                                                                                                                                      QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                          1341
                                                                                                                                                                            2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2936 ITACICIGCITITATICICAAGAAIGGIAIGCACGICGGCACIGICCICIGAAAAAICCC 2995
                                                                                                                                                                                                                                                                                1221
                                                                                                                                                                                                                                                                                                                                                                                        2755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GICAIGCIGAIACICTICCITGICAIIGGAGGAAIGIIGAACIICAIGAIGCAIGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GIGCICITAIGCCIGCTICAICCIGGCCCCCCICTGIGIICCIGICITIGCCAACAIGAGC
                    2456 CAGGAGCCCTTCAGCGCTCGTGTTTATTAACTCCATCTTGCCAGT
                                                                                                                                                           2516 GFGCTGATTCTCTTACTTTTTTTTTTTGCACTGGCTCAATGCCTTTGCT
                                                                                                                                                                                                                                  TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                       2696 AAGGACTITCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2756 GCTGTATCTGCTGTAGTACACGAATATGCCTTGGCTGTTTGCTTTGAGCTTTTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1402 CGCACCGGCCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1462 CAGGICAGCCIGIACIGCCAGGAGIGGIACGCACGGCGGCACIGCCCCTIACCCCAGGCA
                                                                                                                                                                                                               GAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTĆCTTC
                                                                                                                                                                                                                                                                                                                                                     1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                            CIGGICICCGCAGGCCCCAIGAGIAIAICIICIGCIICGICCIGGGGIICTICIAICCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCTGTTCGTGCTCTTCATGTTCTTTGGAATGCCTTTCAACTTCATTGTCAATGATAGT
                                                                      CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                         1042 ATCTTCATGCTGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTITCIGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHOLESTEROL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: CHANG, TA-YUAN
APPLICANT: CHANG, CATHERINE C. Y.
TITLE OF INVENTION: ACYL COENZYME A:
"ITLE OF INVENTION: ACYLTRANSFERASE (
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/121,057
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S: LAHIVE & COCKFIELD 60 STATE STREET, SUITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/08121057 Patent No. 5484727 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LAMPORT HAMMITTE, ANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ASCII Text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 60 ST
CITY: BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΜA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: M. COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-121-057-2
                                                                                                                                                                                                                                                                                                                                                                                                                             1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2996
                                                                        982
                                                                                                                                                                                                                                                                                      1162
     922
                                                                                                                                                                                                                 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
```

염 ŏ g

```
2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              986 AGCCCTTCAGCACCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGCATCT 1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1046 TCATGCTGCTCTCTTTTTTTCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCGAGA 1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2588 IGATTCTTTCTTACTTTTTTTGCCTTTTTTGCACTGCTGCCTCAATGCCTTTGCTGAGA 2647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2468 ICTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAACAGG 2527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2048 TGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGA 2107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2227
                                                                                                                                                                                                                                                                                                                                                                                                                                               1808 CACCTCCAGAACAAGGAAGATTTTTATTGCAAGGCGCTCTCTTAGATGAACTGCTTG 1867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGTGGACCACATCAGAACAATATATACACATGTTTATTGCCCTCCTCATTCTCTTTATCC 1927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            347 AGGIGCAGCATTICCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                    287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGG--AGTTTGACCT 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2288 GIGCCTCGGGTACTAATTCAGCTAAGGAAAATCAAGCACTGTTCCAATACCTACACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1408 ATCCCACTGTAAGATGGGGTTATGTTGCTATGAAGTTTGCACAGGTCTTTGGTTGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GIICICAICCGCIGAICCGIICICITICCAIGGCIITICITICAIGAICITCCAGAITG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        584 AGGCGACGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644 CGGTCCACGTGGCCG------TGGAGCATCAGCTCCCGCCGCCTCCCGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2168 GAGTICTAGGITITGGACCAACATATGTTGTGTTAGCATATCCTGCCACCAGCTTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          806 CCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               866 CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC
                                                                                                                                                                                                                                                                                                                                                          21;
                                                                                                                                                                                                                                                                                                                 Length 4079;
                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                               Score 359.8; DB 1;
Pred. No. 6.6e-83;
); Mismatches 502;
                                                                                                                                                                                                                                                                                                                                                          0
34,858
                REFERENCE/DOCKET NUMBER: DO
TELECOMMUNICATION INFORMATION
TELEPHONE: (617) 227-570
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                 22.9%;
58.0%;
                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 4079 base pairs
                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                         single
REGISTRATION NUMBER:
                                                                                                                                                                                 TYPE: nucleic acid
                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                             , MOLECULE TYPE:
US-08-121-057-2
                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                              Matches 722;
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               691
```

Ì

4

ò

Db Qy Db

Óγ

qq

ò

ŏ

Qγ

```
1345
                                                                                                                                                                                                                                                                           1405
                                                                                    2828 TATCTGCTGTAGTACACGAATATGCCTTGGCTGTTTGCTTGAGCTTTTTCTATCCGTGC
 TGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCA
                ACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGG
                                                                                                                                                                                                                                                                       TGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCA
                                                                                                                                                                                                                                                                                             CCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGG
                                                                                                                                                                                                                                                                                                                                                            ATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCGAGGGGTAGCCATGCTGGTGTTCCTGG
                                                                                                                                                                     ACTITCICICGGITITICICCAAGAGAITCAAAICIGCIGCCAIGITAGCIGICITIGCIG
                                                                                                                                                                                                        TCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Catherine C.Y.
Cholesterol Acyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                TCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCCACTGCCCCT 1510
                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/509,187D
FILING DATE: 31-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DCI-033cbdv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Chang, Ta-Yuan and Chang, TITLE OF INVENTION: ACYL Coenzyme A: NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS: ADDRESSE: LAHIVE & COCKFIELD, LLP STREET: 28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/08509187D Patent No. 5834283 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Lamport Hammitte, Ann REGISTRATION NUMBER: 34,858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: DO TELECOMMUNICATION INFORMATION: TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 4079 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (617)742-4214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Boston
STATE: Massachusetts
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-509-187D-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-509-187D-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
                                2648
                                                                                                2708
                                                                                                                                                                                                                                                                                                        2888
                                                                                                                                                                                                                                                                                                                                           1406
                                                                                                                                                                                                                                                                                                                                                                            2948
                                                                                                                                  1226
                                                                                                                                                                      2768
                                                                                                                                                                                                       1286
1106
                                                                                                                                                                                                                                                                         1346
                                                                                                                                                                                                                                                  ŗ
ò
                                g
                                                                                             g
                                                                                                                                  ò
                                                                                                                                                                   a
                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                  ò
```

1045 2227 2347 2587 1105 2647 TGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCA 1165 2767 1285 2827 2047 2407 2467 2527 1225 1286 TCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCTGGGGGTTCTTCTATCCGTCA 1345 1987 CACCTCCAGAACAAGGAAAGATTTTATTGCAAGGCGCTCTCTTTAGATGAACTGCTTG 1867 643 9 925 523 583 802 865 464 Gaps AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA CCTGTCTTATGCATTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCC CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC ATCCCACTGTAAGATGGGGTTATGTTGCTATGAAGTTTGCACAGGTCTTTGGTTGCTTTT TCATGCTGCTGCTCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCGAGA ACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGG 287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG TGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGC AGGCGACGGGCCTGGGCTGTGTGTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGC CGGTCCACGTGGCCG------TGGAGCATCAGCTCCCGCCGCCTCCCGTTGT 2168 GAGTICTAGGTTTTGGACCAACATATGTTGTGTTAGCATATCCTGCCACCAGCTTCCCGG GTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCC-----CCCCAGTTTCT CCAGCTACCTCTTCTTCTGCCCAACACTCTACAGGGAGACTTACCCTAGGA AGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGCATCT ATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCCTGG TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGG--AGTTTGACCT ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG 21; Length Indels 0; Mismatches 502; DB 2; 6.6e-83 Score 359.8; Pred. No. 6.6 22.9%; 58.0%; 722; Conservative Similarity Query Match Best Local Matches 72 347 1868 1928 8861 2048 2408 2468 2528 1046 2108 2288 998 2588 1106 1166 2708 1226 407 465 524 584 644 691 751 908 986 2648

```
691
                                                                                                                                                                                                                                                                                                                                                               908
                                                                                                                                                                                                                                                                                                                                                                                                                 998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1106
                         1928
                                                                                                                                                                                                                                                                                                              751
                                                                                                    524
407
                                                   465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                        QΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pp
                        g
                                                   ò
                                                                         qq
                                                                                                     δ
                                                                                                                            g
                                                                                                                                                       δλ
                                                                                                                                                                              pp
                                                                                                                                                                                                          δλ
                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   347 AGGIGCAGCATITCCGCACCAICTACCACATGITCATCGCTGGCCTGTGTGTTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCCCTGGGGAAACAGAAAGTTTTCATCCTCCCAAGTCCCTGCTTGATGAGCTGATGG 346
  2888 TGTTCGTGCTCTTCATGTTCTTTGGAATGGCTTTCAACTTCATTGTCAATGATAGTCGGA
                                                                                         CCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGG
                                       TGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2; Length 4079;
                                                                                                                                           TCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCCACTGCCCCT 1510
                                                                                                                                                          3008 TCTGCTTTATTCTCAAGAATGCTATGCACGTCGGCACTGTACCT 3052
                                                                                                                                                                                                                                                                     APPLICANT: CHANG, TA-YUAN
APPLICANT: CHANG, CATHERINE C. Y.
TITLE OF INVENTION: ACYL COENXYME A: CHOLESTEROL.
TITLE OF INVENTION: ACYLTRANSFERASE (ACAT)
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 6.6e-83;
; Mismatches 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 359.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/509,187
FILING DATE: 07/31/95
ATTORNEY/AGENT INFORMATION:
NAME: LAMPORT HAMMITTE, ANN.
REGISTRATION NUMBER: 34,858
REFERENCE/DOCKET NUMBER: DOI-033CPDV
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELETAX: (617) 227-2700
TELETAX: (617) 242-4214
INFORMATION FOR SEQ ID NO: 2:
-$EQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/121,396
                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII Text
                                                                                                                                                                                                                                   Sequence 2, Application US/09121396
Patent No. 5968749
                                                                                                                                                                                                                                                                                                                                                     COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22.9%;
                                                                                                                                                                                                                                                                                                                                        STATE: MAINE & COCKI STREET: 28 STATE STREET CITY: BOSTON STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : 4079 base pairs
nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    single
                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                 02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Sim
Matches 722;
                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                       US-09-121-396-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGIH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-121-396-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1808
                                                                                         1406
                                        1346
                                                                                                                   2948
                                                                                                                                              1466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                g
                                                                 g
                                                                                                                 qq
                                                                                                                                                                      g
                                        ò
                                                                                          8
                                                                                                                                              δ
```

```
1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1166 ACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGG 1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1226 ATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGTAGCCATGCTGGTGTTCCTGG 1285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1286 TCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCA 1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1346 TGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCA 1405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2227
                                                TCAGCACACTTGTAGTAGATTACATTGATGAAGGAAGGCTGGTGCTTGCAAGTTACGCCT 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1406 CCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2648 TGTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTCCACGTCATACTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2828 TATCTGCTGTAGTACACGAATATGCCTTGGCTGTTTGCTTGAGCTTTTCTATCCGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCATGCTGCTGCTCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2588 TGATTCTCTTACTTTTTTTTGCCTTTTTGCACTGCTGGCTCAATGCCTTTGCTGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2708 ACTATTATAGAACCTGGAATGTGGTGGTCCATGACTGGCTATATTACTATGCTTACAAGG
                                                                                                                                                                                                                                                                      2048 TGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGA
                                                                                                                                                                                                                                                                                                                            584 AGGCGACGGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGC
                                                                                                                                                                                                                                                                                                                                                               108 GITCICATCCGTCGTCTCTTCCATGGCTTTCTTTCATGATCTTCCAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2288 GIGCCICGGGTACIAATICAGCTAAGGAGAAAICAAGCACIGITCCAATACCTACAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGCATCT
                                                                                                                                                           1988 CCTGTCTTATGCCATTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCC
                                                                                                                                                                                                                     TGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                          644 CGGICCACGIGGCCG-------IGGAGCAICAGCICCCGCCGCCTCCCGTIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GIGCCIGGGATCCIICGIGCCAGACGAGGIGAGGGGATCCAGGCC-----CCCAGITICI
TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGG--AGTTTGACCT
                                                                                                          ACTG - ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1466 TCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCT 1510 🔩
```

2467

2347

2527

σ

a

```
AGCCCTTCAGCACCCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGCATCT 1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCCGCAGGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCGTCA 1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1406 CCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGG 1465
                                                                                                                                                                                           806 CCAGCTACCTCTTCTTCTGCCCAACACTCATCTACAGGGGGGAGACTTACCCTAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTACTACCGCACTTGGAACGTGGTGCTCCATGACTGGCTGTACAGCTACGTGTATCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2888 TGTTCGTGCTCTTCATGTTCTTTGGAATGGCTTTCAACTTCATTGTCAATGATAGTCGGA
                                                                                                                                                                                                                                                    CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC
                                                                                                                                                                                                                                                                                                                              TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCCCTTCAGCGCTCGTGTTCTGGTCTATGTGTATTTAACTCCATCTTGCCAGGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCATGCTGCTGCTCATCTTCTTTGCCTCCATTGCTGGCTCAACGCCTTTGCCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTITCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1466 TCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCT 1510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3008 TCTGCTTTTATTCTCAAGAATGGTATGCACGTCGCACTGTACCT 3052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08121057
Patent No. 5484727
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: CHANG, TA-YUAN
APPLICANT: CHANG, CATHERINE C. Y.
TITLE OF INVENTION: ACYL. COENSYME A: CHOLESTEROL
TITLE OF INVENTION: ACYLTRANSFERASE (ACAT)
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3: LAHIVE & COCKFIELD 60 STATE STREET, SUITE 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: LA
STREET: 60 ST
CITY: BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-121-057-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                           2528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1346
                     691
                                                                                               751
                                                                                                                                                                                                                                                                                                                                                                                                        986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2708
                                                       g
                                                                                                                             qq
                                                                                                                                                                     ò
                                                                                                                                                                                                         QQ
                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                       ò
                                                                                             Ω
                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2048 IGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGA 2107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2108 GTTCTCATCCGTGATCCGTTCTTTCCATGATCTTTCATGATCTTCCAGATG 2167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2168 GAGTTCTAGGTTTTGGACCAACATATGTTGTTAGCATATCCTGCCACCAGCTTCCCGG 2227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1988 CCTGTCTTATGCATTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCC 2047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGTGCAGCATTTCCGCCACCATCTACCACATGTTCATCGCTGGCCTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGG--AGTTTGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGCGACGGGCCTGTGCGCCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     644 CGGTCCACGTGGCCG------TGGAGCATCAGCTCCCGCCGCCGCCGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 4079;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.9%; Score 359.8; DB 58.0%; Pred. No. 6.6e-83;
                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. SER. NO. 959,950
FILING DATE: Occober 14, 1992
APPLICATION NUMBER: U.S. SER. NO. 121,057
FILING DATE: September 10, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                   TITLE OF INVENTION: ACYL COENZYME A: CHOLE TITLE OF INVENTION: ACYLTRANSFERASE (ACAT) NUMBER OF SEQUENCES: 9 COMPTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: LAMPORT HAMITTE, ANN.
RECISTRATION NUMBER: 34,858
REFERNCE/DOCKET NUMBER: DCI-033CP
TELECOMUNICATION INFORMATION:
TELEPHONE: (617) 227-2700
TELEPHONE: (617) 227-5941
INFORMATION FOR SEQ. ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US93/09704A
                                                                                                               Sequence 2, Application PC/TUS9309704A GENERAL INFORMATION:
                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                              October 12, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 4079 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 58.0 es 722; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                               PCT-US93-09704A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US93-09704A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                   3008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         407
```

g

ò

ò

g

٥y g

ð

g

õ

g

ò

2707 1225 2767

1165

2827

1405

```
287 CATCCCTGGGGAAACAGAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                262 CACCTCCAGAACAAGAAAGATTTTATTGCAAGGCGCTCTCTTTAGATGAACTGCTTG 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              347 AGGIGCAGCATITCCGCACCATCIACCACATGTTCATCGCTGGCCTGTGTGTTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    926 TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG 985
                                                           862 ATCCCACTGTAAGATGGGGGTTATGTTGCTATGAAGTTTGCACAGGTCTTTGGTTGCTTTT 921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGG--AGTTTGACCT
                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Chang, Ta-Yuan and Chang, Catherine C.Y.
TITLE OF INVENTION: ACYL Coenzyme A: Cholesterol Acyltransferase
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 8.6%; Score 134.6; DB 2; Length 9 Best Local Similarity 53.1%; Pred. No. 2.6e-25; Matches 390; Conservative 0; Mismatches 324; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1...
CURRENT APPLICATION DRAR:
APPLICATION NUMBER: US/08/509,187D
FILING DATE: 31-JUL-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                    2: LAHIVE & COCKFIELD, LLP
28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release
                                                                                                                                                                                                                                                                       Sequence 1, Application US/08509187D Patent No. 5834283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Lamport Hammitte, Ann
REGISTRATION NUMBER: 34,858
REFERENCE/DOCKET NUMBER: DCI
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : 996 base pairs
nucleic acid
EDNESS: single
                                                                                                                                986 AGCCCTTCAGCACCC 1000
                                                                                                                                                      982 AGCCCTTCAGCGCTC 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: CDNA US-08-509-187D-1
                                                                                                                                                                                                                                                                                                                                                                                                                             ADDALL
STREET: 20
TTY: Boston
Massac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                δλ
                                                                                        g
                                                                                                                                  δ
                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       682 TICATCATTATTCGAGCAGATCGTTTTGTAATGAAGGCCCACTCATTGTCAGAGGAAC 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTTTCT 805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               806 CCAGCTACCTCTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCTAGGA 865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  866 CGCCCTATGTCAGGTGGATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC 925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          442 CCTGTCTTATGCATTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCC 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGC 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCCTCGGGTACTAATTCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACAGTCA 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              347 AGGIGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    465 ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                502 TGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       584 AGGCGACGGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         634 ---TGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGCCGCCTCCCGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGCACCCTGGCCATCGACTTCATTGATGAGGCAGGCTGCTGCTGG--AGTTTGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches 324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 2.6e-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 134.6;
                                                                                                                                                                                                                    CLASSIFICATION: 800
CLASSIFICATION: 800
NATORNEY/AGENT INFORMATION:
NAME: LAMPORT HAMMITTE, ANN
REGISTRATION NUMBER: 34,858
REFERENCE/DOCKET NUMBER: DCI-033CP
RELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-2901
TELEPHONE: (617) 227-2901
INFORMATION FOR SEO ID NO: 1: SEQUENCE CHARACTERISTICS:
LENGRAT OF SEO EASE PAIRS
TEMPE: NUCLEIC ACID
STRANDEDNESS: Single
                                                     MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible . OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCLIT WAX CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/121,057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 8.69
Best Local Similarity 53.19
Matches 390; Conservative
                                   ZIP: 02109
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TOPOLOGY: 11;
; MOLECULE TYPE:
US-08-121-057-1
```

qq

ŏ q g

ò

g δλ Dp ò a

ŏ

g

4

Thu

```
Best Local
                                                                                                                                                                                                                                                                                                                                                            442
                                                                                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              982
                                                                                                                                                                                                                                                                              407
                                                                                                                                                                                                                                                                                                                                   465
                                                                                                                                                                                               셤
                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                         982
                                                   633
                                                                            621
                                                                                                                                                         750
                                                                                                                                                                                    741
                                                                                                                                                                                                             802
                                                                                                                                                                                                                                                                 CCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGA 865
                                                                                                                                                                                                                                                                                            861
                                                                                                                                                                                                                                                                                                                     CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC 925
                                                                                                                                                                                                                                                                                                                                               921
                                                                                                                                                                                                                                      GTGCCTCGGGTACTAATTCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACAGTCA 801
 TGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGGCCAGGGGCACCTGGACGC
                                                                                                                                                                       ACCAGTATTTGTACTTCTTATTTGCTCCTACCCTTATCTACCGTGACAGCTATCCCAGGA
                                                                                                                                                                                                                                                                                                                                                                                       502 TGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGA
                                                                          GAGTICTAGGITITIGGACCAACATATGTTGTTAGCATATCCTGCCACCAGCTTCCCGG
                                                                                                                                                         GTCCTGGTCTTCGAGCAGGTTAGGTTCCTGATGAAAAGCTACCTTCCTGAGAGAGGCT
                                                                                                                                                                                                             GTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCC-----CCCAGTTTCT
                                                                                                                                                                                                                                                                                                                                    TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG
                                                                                                      584 AGGCGACGGCCTGGCCTGTGCCCTTTTAGCCGCCCACGCCGTGGTGCTC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: CHANG, TA-YUAN
APPLICANT: CHANG, CATHERINE C. Y.
TITLE OF INVENTION: ACYL COENZYME A: CHOLESTEROL
TITLE OF INVENTION: ACYLTRANSFERASE (ACAT)
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 28 STATE STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: DCI-033CPDV TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 227-2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUCKASTICATION DATA:
PROC APPLICATION DATA:
APPLICATION NUMBER: US/08/509,187
FILING DATE: 07/31/95
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/121,396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/09121396
Patent No. 5968749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: LAMPORT HAMMITTE, ANN. REGISTRATION NUMBER: 34,858
                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCCTTCAGCACCC 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCCCTTCAGCGCTC 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: LAI
STREET: 28 STA
CITY: BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                            562
                                                                                                                               622
                                                                                                                                                                                  682
                                                                                                                                                                                                                                                                806
                                                                                                                                                                                                                                                                                                                                              862
                                                                                                                                                                                                                                                                                                                                                                                                 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                    982
524
                                                                                                                                                                                                           751
                                                                                                                                                                                                                                    742
                                                                                                                                                                                                                                                                                          802
                                                                                                                                                                                                                                                                                                                     998
                                                                                                                                                                                                                                                                                                                                                                        926
                                                                                                                                                                                                                                                                                                                                                                                                                           986
                                                                                                                                                        691
                                                                                                     634
                                                                                                                                                                              op
Op
                                                                                                                              a
                                                                      g
                                                                                                   ò
                                                                                                                                                        ò
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
865
                                                                                                                                                                                                                                                                                                                                                                          347 AGGIGCAGCATTICCGCACCAICTACCACATGTICAICGCTGGCCTGTGTGTCTTCAICA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC 925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGGTGG 346
                                                                                                                                                                                                                                                                                                                                 922 TCTATGTGTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAACAGG 981
                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGCGCACTGGCTATAGCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802 ACCAGTATTTGTACTTCTTATTTGCTCCTACCCTTATCTACCGTGACAGCTATCCCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGG--AGTTTGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCCACCTGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGCGACGGGCCTGGGCCTGTTTTAGCCGCCCACGCCGTGGTGCTC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GITCTCATCCGCTGATCCGTTCTCTTCCATGGCTTTCTTTTCATGATCTTCCAGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---TGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGCCTCCCGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             806 CCAGCTACCTCTACTTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGA
                                                                                                                                                                                                                                                 21;
                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                        Score 134.6; DB 2;
Pred. No. 2.6e-25;
0; Mismatches 324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACYL COENZYME A: CHOLESTEROL
                                                                                                                                                                                                                                                                                                                                                                                                  =
=
=
=
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application PC/TUS9309704A GENERAL INFORMATION:
                                                                                                                                                                                                        Query Match 8.6%;
Best Local Similarity 53.1%;
Matches 390; Conservative
TELEFAX: (617) 742-4214
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 996 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCCCTTCAGCACCC 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCCCTTCAGCGCTC 996
                                                                                                                                            MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US93-09704A-1
                                                                                                                          TOPOLOGY:
                                                                                                                                                                   US-09-121-396-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                          Query Match
```

```
RESULT 14
US-09-326-203A-14
IS-09-326-203A-14
Sequence 14, Application US/09326203A
Sequence 14. Application US/09326203A
Sequence 14. Application US/09326203A
Sequence 14. Application Wike
Sequence 14. Application Sequence 17 TILE OF INVENTION: Actil Coolach Cholesterol Acyltransferase Related Nucleic TILE REFERENCE: 17045/00/WO
STILE OF INVENTION: Acid Sequences
FILE REFERENCE: 17045/00/WO
CURRENT FILING DATE: 1998-06-04
PRIOR APPLICATION NUMBER: 60/088,143
PRIOR FILING DATE: 1998-06-05
PRIOR FILING DATE: 1998-06-06
PRIOR FILING DATE: 1998-06-06
PRIOR FILING DATE: 1998-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1139 ACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATG 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1033 ACTGGTGGAACTCCGAGTCTGTCACCTACTTCTGGCAGAACTGGAACATCCCTGTGCAA 1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGCCCCATGAGTATATCTTCTGCT 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1079 ATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1093 AGIGGIGCATCAGACACITCIACAAGCCCATGCITCGAC-----GGGGCAGCAGCAAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            913 TCCTGAAGCTGGCGGTCCCCAATCACCTCATCTGGCTCATCTTCTTACTGGCTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGC
                                                                                    TCTATGCCTGCTTCATCCTGGGCCGCCTCTGTTTCCTGTCTTTGCCAACATGAGCCGAG
                                                                                                                                                                     Length 1895,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 95; DB 4; Length 189
Pred. No. 4.9e-15;
0; Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: n at position 209 is unknown US-09-326-203A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 6.1%;
Best Local Similarity 58.7%;
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1319 TCGTCCTGGGGTTCTTC 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        recercicedangire 1223
                                                                                                                                                                                                                                  986 AGCCCTTCAGCACCC 1000
                                                                                                                                                                                                                                                        982 AGCCCTTCAGCGCTC 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 46 SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
LOCATION: (209)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1207
                                                                                                                                                 926
                                                                                                                                                                                             922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                         Op
                                                                                                                                                                                                                                      ŏ
                                                                   δ
                                                                                                        PP
                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GIGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTTTCT 805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCCTCGGGTACTAATTCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACAGTCA 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          347 AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ---TGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGCCGCCTCCCGTTGT 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       622 GAGTICTAGGITTTGGACCAACATATGTTGTGTTAGCATATCCTGCCACCAGGTTCCCGG 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            682 TTCATCATTATTCGAGCAGATCGTTTTGTAATGAAGGCCCACTCATTTGTCAGAGAGAAC 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGCTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGGGGGCTTACCCTAGGA 865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTG-ATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTC 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   562 GITCTCAICCGCIGAICCGTICTCTCTTCCAIGGCITTCTTTTCAIGAICTTCCAGAITG 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGICCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGGCCAGGGGCACCTGGACGC 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     407 TCAGCACCCTGGCCATCGACTTCATTGATGAGGCCAGGCTGCTGCTGG--AGTTTGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584 AGGCGACGGGCCTGGGCTGTTTTAGCCGCCCACGCCGTGGTGCTC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 134.6; DB 5;
Pred. No. 2.6e-25;
0; Mismatches 324;
                                                                                                                                                                                             FILING DATE: October 12, 1993
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. SER. NO. 959,950
FILING DATE: October 14, 1992
APPLICATION NUMBER: U.S. SER. NO. 121,057
        ACYLTRANSFERASE (ACAT)
                                                                                                                                                                                                                                                                                                                                                            NAME: LAMPORT HAMMITTE, ANN.
REGISTRATION NUMBER: 34,858
REFERENCE/DOCKET NUMBER: DCI-033CP
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-2700
TELEPHONE: (517) 227-5941
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                         APPLICATION NUMBER: PCT/US93/09704A
                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                       FILING DATE: September 10, 1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 53.1%;
Matches 390; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 996 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                    SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT-US93-09704A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
```

```
1079 ATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1139 ACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATG 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1199 ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1392 AGTGGTGCATCAGACACTTCTACAAGCCCATGCTTCGAC-----GGGGCAGCAGCAGT 1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1259 GGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCT 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1212 recreaagergeeggreeceaarcacercarergeercarerreracragerrerrec 1271
                                                                                     GENERAL INFORMATION:

APPLICANT: Sturley, Stephen L.

APPLICANT: Olivers, Peter

TITLE OF INVENTION: ISOLATION OF A GENE ENCODING DIACYLGLYCEROL

TITLE OF INVENTION: ACYLTRANSFERASE

TITLE OF INVENTION: ACYLTRANSFERASE

TITLE OF INVENTION: ACYLTRANSFERASE

TITLE OF INVENTION: ACYLTRANSFERASE

CURRENT APPLICATION NUMBER: US/09/165,042

CURRENT FILING DATE: 1998-10-01

NUMBER OF SEQ ID NOS: 32

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 2

LENGTH 1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.1%; Score 95; DB 3; Length 1976; 58.7%; Pred. No. 5e-15; tive 0; Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Search completed: April 30, 2003, 14:37:38 Job time: 95 secs
                                               Sequence 2, Application US/09165042 Patent No. 6100077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1506 TCCTCTGCGAATGTTC 1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 58.7%
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Yeast
US-09-165-042-2
RESULT 15
US-09-165-042-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유가
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

THIS PAGE BLAUK (USPTO)

```
April 30, 2003, 14:09:11; Search time 141 Seconds (without alignments) 13148.677 Million cell updates/sec
                                                                                                                                            US-09-918-026A-3
1569
1 atygagccaggcggggcccg.......cttggtcctgccatacctag 1569
                                                                                                                                                                                                                                                                                                                                                                                                                        1492128
GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                            Potal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                  746064 seqs, 590810554 residues
                                                                                                                                                                                                                                                                                                                                                                                                              Published_Applications_NA:*
                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                         OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                     IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                             Title:
Perfect score:
Sequence:
                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                              Database :
                                                                                                                                                                                                                                                Searched:
                                                                                      Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		æ				
Result		Query				
. 02	Score	Match	Match Length DB	DB	ID	Description
- n	403.6	25.7	418	6	US-09-918-995-33158	Sequence 33158, A
7	391	24.9	399	σ	US-09-918-995-33281	Sequence 33281, A
e	387.2	24.7	401	σ	US-09-918-995-33355	Sequence 33355, A
4	386	24.6	402	σ	US-09-918-995-33444	
ß	385.6	24.6	401	σ	US-09-918-995-33843	Sequence 33843, A
Q	384	24.5	393	σ	US-09-918-995-33739	Sequence 33739, A
7	376.2	24.0	401	σ	US-09-918-995-33159	
œ	350.6	22.3	365	6	US-09-918-995-34424	Sequence 34424, A
6	350.6	22.3	408	6	US-09-918-995-34099	
10	338.2	21.6	383	6	US-09-918-995-35056	Sequence 35056, A
11	138.8	8.8	471	6	US-09-918-995-32388	Sequence 32388, A
c 12	95	6.1	993	10	US-09-764-853-79	Sequence 79, Appl
13	95	6.1	1411	6	US-10-273-438-1	Sequence 1, Appli
14	95	6.1	1895	6	US-10-157-855-14	Sequence 14, Appl
15	93.8	6.0	542	σ	US-09-764-868-587	Sequence 587, App
16	92.4	5.9	774	6	US-09-764-868-279	
17	81.4	5.2	447	σ	US-09-918-995-29256	Sequence 29256, A
18	81.4	5.2	452	10	US-09-867-701-4664	Sequence 4664, Ap
19	81.4	5.2	1650	σ	US-10-273-438-3	Sequence 3, Appli

Apple 100, 100, 100, 100, 100, 100, 100, 100	Sequence 60, Appl Sequence 59, Appl
	0 US-09-866-562-60 0 US-09-866-562-59
	7.7 7.7
1650 11125 11125 11765 11875 11875 11876 1	1089 1176
0.00 0.00	2.6
81.4 80.0	40.6
220 221 222 222 223 223 333 333 333 44 44 44 43	44
U	

ALIGNMENTS

	0;	
	Gaps	CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTG
	.: .:	CTTG CTTG CTTG CCCA CCCA CCCA CCCA CCCA
	418;	CGCACCACCACCACCACCACCACCACCACCACCACCACCA
Q	Length 418; Indels 0	CTAC
OBTAINED	Len	ACTA ACTA ACTA SATGG SATGG STCTC 1111 STCTC 1111 ATGCT
	DB·9; e-110; 4;	CTCCC CTCCCC CTCCCC CCTCCCC CCTCCCCCCCC
UENC	Ψ	CCTT/ CCTT/ CCTT/ CCTT/ FILL TGTT/ FILL TGTT/ ATCC/ ATCC/
seo N LIB 995 6	103.6 40. 2 match	AACGT AACGT TIIII TIIII TIIIII SGGTG SGGTG SGGTG
18995 ACII CDN/ 7918, 7918, 35,07	Score 403.6; DB.9; Pred. No. 2.8e-110; 0; Mismatches 4;	ACTCA ACTCA ACAGG ACAG ACAG ACAGG ACAG ACAG ACAGG ACAGG ACAGG ACAGG ACAGG ACAGG ACAGG ACAG ACAG ACAG ACAG ACAG ACAGG ACAG ACAG ACAG ACAG ACAG ACAG ACAG ACAG ACAG
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0	1166A 1111 11111 11111 11111 11111
Dn US 3623A 3623A M VAR 66: U 01-07 : US/ 01-20 01-20	25.7%; 99.0%; ive	CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTG [
Catic 30073 C. NOVE FROI 11-75 NUMBI NUMBI 999-(1: 388 r Will	vat	CGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
ppli 52200 52200 7 In 00N: 00N: 2041 2041 10N NU E: 1 0 NOS	rity	CTAC 1111 1667C 166CC 1111 166CC 1111 1111 1110 111
83158 NO. U NO. U HYBACI HYBACI FENTI FENTI FENTI FORTI CATIC CATIC S DATE S DA	imila CC	ATGTT ATGTT ATGTT STGGT SCCCC FATAT FATAT
995-7 100 L 100 L	tch al S: 406	CAGG/ CAGG/ CAGG/ CAGG/ CAGG/ CAAC(CAAC(CAAC(CAAC(CAAC(CAGG/ TGAG/ TGAG/ TGAG/ TGAG/
US-09-918-995-33158 US-09-918-995-33158 Sequence 33158, Application US/09918995 Publication No. US20030073623A1 GENERAL INFORMATION: APPLICANT: Hyseq, Inc. TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES FILE REFERENCE: 2041-756 CURRENT APPLICATION NUMBER: US/09/918,995 CURRENT APPLICATION NUMBER: US/09/235,076 PRIOR APPLICATION NUMBER: US/09/235,076 PRIOR PILING DATE: 1999-01-20 SOFTWARE: PESTEEQ for Windows Version 3.0 SEQ ID NO 33158 LENGTH: 418 TYPE: DNA TYPE: DNA COGGANISM: Homo sapiens US-09-918-995-33158	Query Match Best Local Similarity 99.0 Matches 406; Conservative	1122 9 6 11182 6 69 1 1242 1 1302 1
RESULT OS Sequipolar Sequipolar Publication CORE CORE CORE CORE CORE CORE CORE CORE	Quer Best Matc	
RES US:		

```
Query Match
                                                                                                                                                                  LENGIH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCA 1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1122 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTACGCACTTG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1182 GAACGIGGIGGICCAIGACIGGCIGIACAGCIACGIGIAICAGGAIGGGCIGCGGCICCI 1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1302 TGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCT 1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAA 1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 249 TGTCATTGGAGGAATGTTGAACTTCATGATGATGACCAGCGCCCGGCCCGGCATGGAA 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCTCGTACTGCCA 368
249 TGTCATTGGAGGAATGTTGAACTTCATGATGATGACCAGCGCACCGGCCCGGCATGGAA 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTGCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189 TGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1242 TGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCA
                                                                        309 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGAATCCAGGTCAGGCCAGTACTGTCA
                                                      1422 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGGCTGTACTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
0
                                                                                                                                 1482 GGAGTGGTACGCACGGCGCCACTGCCCCTTACCCCAGGCAACTTTCTGGG 1531
                                                                                                                                                   APPLICAMT: Hyseq. Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
FILE REPERENCE: 20411-756
CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT FILING DATE: 2001-07-30
PRIOR PILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 33281
LENGTH: 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24.9%; Score 391; DB 9; L6
100.0%; Pred. No. 1.6e-106;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGTGGTACGCACGCCGCACTGCCCCTTA 1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
US-09-918-995-33355
US-09-918-995-33355
Sequence 33355, Application US/09918995
Publication No. US20030073623A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                            Sequence 33281, Application US/09918995 Publication No. US20030073623A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 24.9
Best Local Similarity 100.
Matches 391; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapiens US-09-918-995-33281
                                                                                                                                                                                                                                                 US-09-918-995-33281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                      369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                              ò
                                                                                                  a
                                                                                                                                       ŏ
                                                                                                                                                                      셤
```

```
1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1422 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCA 1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1122 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTACGCACTTG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             309 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCTCGTACTGCCA 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            129 TGGTGCCCGGGCCCGAGGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1182 GAACGIGGIGGICCAIGACIGGCIGIACAGCIACGIGIAICAGGAIGGGCIGCGGCICCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1362 IGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACGGCCCGGCCTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249 TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGGGCACCGGCCCGGCATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1242 TGGTGCCCGGGCCCCGAGGGGTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 33444, Application US/09918995
; Publication No. US20030073623A1
; GENERAL INFORMATION:
    APPLICANT: Hyseq, Inc.
    ITILE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
    TITLE OF INVENTION: FROM VARIOUS cDNA LIBRARIES
; TITLE OF INVENTION: FROM VARIOUS cDNA LIBRARIES
; CURRENT APPLICATION NUMBER: US/09/918,995
; CURRENT FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: US/09/235,076
; PRIOR APPLICATION NUMBER: US/09/235,076
; NUMBER OF SEQ ID NOS: 3899-01-20
; NUMBER OF SEQ ID NOS: 3805.386
; SEQ ID NOS: 38444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 402;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 387.2; DB 9;
Pred. No. 2.1e-105;
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES FILE REFERENCE: 20411-756
CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT FILING DATE: 2001-07-30
PRIOR FILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARR: FastEEQ for Windows Version 3.0
SEQ ID NO 33355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1482 GGAGTGGTACGCACGGCGCCACTGCCCCTTACC 1514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          169 NGAGTGGTACGCACGCGGCACTTGCCCTTACC 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                             ; LOCATION: (1)...(401); OTHER INFORMATION: n = A,T,C or US-09-918-995-33355
                                                                                                                                                                                                                                                                                                                                                                                                                                          24.7%;
99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 99.09
Matches 389; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature LOCATION: (1)...(401)
                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: HOMO :
US-09-918-995-33444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 402
```

DB 9;

Score 386;

24.68;

ö

us-09-918-026a-3.rnpb

```
249 TGTCATTGGAGGAATGTTGAACTTCATGATGATGACCAGCGCACCGGCCCGGCATGGAA 308
  TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGGGCACCGGCCCGGCATGGAA
                                                      CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCA
                                                                                                        GGAGTGGTACGCACGGCGCACTGCCCTTAC 1513
                                                                                                                      GGAGTGGTACGCACGCGCACTGCCCTTAC 400
                                                                                                                                                                                              : Sequence 33739, Application US/09918995
; Publication No. US20030073623A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; LOCATION: (1)...(393)
; OTHER INFORMATION: n = A,T,C or
US-09-918-995-33739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 24.5
Best Local Similarity 100.
Matches 384; Conservative
                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
                                                                                                                                                                      RESULT 6
US-09-918-995-33739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-918-995-33159
                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                             309
                                                                                                       1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1482
                                                     1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1422
  1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
                         g
                                                   ò
                                                                             g
                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCT 1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGGCTCCT 1241
                                       CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTACCGCACTTG 1181
                                                                                                                                             TGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCCA 1301
                                                                                                                                                                                                                                                 TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACGGCCCGGCATGGAA 1421
                                                                                                                                                                                                                                                                                                     CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGGCTGTACTGCCA 1481
                                                                                                       309 CGTGCTGATGTGGACCATGCTGTTTCTATGCCACGGAATCCAGGTCAGCCTGTACTACTGCCA 368
              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                 9
                                                   9 CAGGATGTTCTACCGGGACTGGTGGAACTCACGTCCTTCTCCCACTACTACCACCTTG
                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 33343, Application US/09918995
Fublication No. US20030073623A1
GENERAL INFORMATION:
APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTITIE OF INVENTION: PROM VARIOUS CDNA LIBRARIES
FILE REPERRACE: 20411-756
CURRENT FILING DATE: 2001-07-30
FRIOR PILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 33843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 385.6; DB 9;
Pred. No. 6.4e-105;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 9;
Pred. No. 4.9e-105;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                        GGAGTGGTACGCACGCCGCACTGCCCTTACCC 1515
                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 24.6%;
Best Local Similarity 99.0%;
Matches 388; Conservative (
98.78;
Best Local Similarity 98.7
Matches 389; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
CORGANISM: Homo sapiens
US-09-918-995-33843
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-918-995-33843
                                      1122
                                                                                        1182
                                                                                                                                                                                              1302
                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189
                                                                                                                  69
                                                                                                                                                                                                                                                                                                   1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69
                                                                                                                                             1242
                                                                                                                                                                                                                                                                                                                                                       1482
                                                                                                                                                                                             ò
                                                                                        ò
                                                                                                               a
                                                                                                                                           õ
                                                                                                                                                                  g
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                          ٠<del>۵</del>
                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGAATCCAGGTCAGCCTGTACTGCCA 1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1122 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTACGCACTTG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1182 GAACGTGGTGCTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCT 1241
9 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTACCGCACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION THOUGHTON TO THE CONTROL OF THE CONTROL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24.5%; Score 384; DB 9; L6
100.0%; Pred. No. 1.9e-104;
iive 0; Mismatches 0;
```

ö

```
22.3%;
98.9%;
                                                                                                         Matches 353; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 373; Conserv
                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-918-995-34099
; TYPE: DNA
; ORGANISM: HOMO S
US-09-918-995-34424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 34099
LENGTH: 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δy
                                                                                                                                                                                                                                                                                                                                                                                                                Ď,
                                                                                                                                                                                  Сp
                                                                                                                                                                                                                                                           Dp
                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Óγ
                                                                                                                                                                                                                         å
                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1182 GAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCT 1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGCCCA 1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACGGCCCGGCATGGAA 1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCA 1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1122 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          regreccesseccessessrangerarecressrancerserecressrances 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249 TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAA 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCCAACTACTACTACCGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189 TGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 401;
                                                      APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
FILE REPERENCE: 20141-756
CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR FILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 33159
LENGTH: 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
TITLE OF INVENTION: FERM VARIOUS CDNA LIBRARIES
FILL REFERENCE: 20411-736
CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT APPLICATION NUMBER: US/09/235,076
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR FILLING DATE: 1999-01-20
                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 376.2; DB 9;
Pred. No. 4.1e-102;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1482 GGAGTGGTACGCACGCCGCACTGCCCTTACCC 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-09-918-995-34424
; Sequence 34424, Application US/09918995
; Publication No. US20030073623A1
Sequence 33159, Application US/09918995
Publication No. US20030073623A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                - A, T, C or
                                                                                                                                                                                                                                                                                                                                                                                                                                     24.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature LOCATION: (1)...(401)
                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                             ; LOCATION: (1)...(401)
; OTHER INFORMATION: n
US-09-918-995-33159
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 389; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O ID NO 34424
LENGTH: 365
                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE:
SEQ ID NO
                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         • 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
```

ŏ

g õ

g

ò

g

g δλ

ò

```
1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1122 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTGCACTTG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1242 resteccesseccesassestascearscressistretrecressicasces 1301
                                                                                                                                                                                                                                                                                                                          1301
                                                                                                                                                                                                                                                                                                                                                                                                                                 1302 TGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCT 1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1362 TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAA 1421
                                                                                                                                                                                                            1182 GAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGGTTCT 1241
                                                                                                          1122 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACTGCGCACTTG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                           189 TGAGTATATCTTCTGCTTCGTCCTGGGGGTCTTCTATCCCGTCATGCTGATACTCTTCCT 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     249 TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCACGCCCCGGCCCGGCATGGAA 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74
                                                                                                                                                          89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1422 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCTGTACTG 1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         309 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCACGTCAGCCTGTACTG 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1182 GAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAGTATATCTTCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                135 TGGTGCCCGGGCCCGAGGGAAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCA
                                                                                                                                   9 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCCAACTACTACCGCACTTG
                                                                                                                                                                                                                                                                                                                          1242 TGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCA
                                                                                                                                                                                                                                                                                                                                                      129 TGGTGCCCGGGCCCGAGGGTAACCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCA
                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 408;
Length 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION US/09918995
; Sequence 34099, Application US/09918995
; Sequence 34099, Application US/09918995
; CENERAL INFORMATION:
    APPLICANT: Hyseq, Inc.
; TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
; TITLE OF INVENTION: PROM VARIOUS CDNA LIBRARIES
; TITLE OF INVENTION: PROM VARIOUS CDNA LIBRARIES
; FILE REFERENCE: 20411-756
; CURRENT APPLICATION NUMBER: US/09/235,076
; PRIOR PILING DATE: 1999-01-20
; PRIOR FILING DATE: 1999-01-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                        4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22.3%; Score 350.6; DB 9; ilarity 94.9%; Pred. No. 1.7e-94; Conservative 0; Mismatches 19;
Score 350.6; DB 9
Pred. No. 1.7e-94;
0; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
```

```
q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ω
                                                                        1422 CGTGCTGATGTGGACCATGC-TGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCC 1480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1182 GAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCT 1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1242 TGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCCA 1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAA 1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1422 CGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCA 1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1122 CAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTG 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1302 TGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCT 1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 CAGGATGGTCTACCGGGACTGGTGGAACTCAACGTCCTTGTCCAACTACTACCGCACTTG 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                    69 GAACGTGGTCGTCCATGACTGCTGTACAGCTACATGTATCAGAATGGGCTGCGGATCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   189 TGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGGCATGCTGATACTCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249 TGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCACCGGCCCGGGATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                         APPLICATE: Hyger, Inc.

APPLICATE: Hyger, Inc.

TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES

FILE REPERENCE: 20411-756

CURRENT APPLICATION NUMBER: US/09/918,995

CURRENT APPLICATION NUMBER: US/09/235,076

PRIOR FILING DATE: 1999-01-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 338.2; DB 9;
Pred. No. 8.4e-91;
0; Mismatches 18;
                                                                                                                                                    1481 AGGAGTGGTACGCACGCCGCACTGCCCCTTAC 1513
                                                                                                                                                                      375 AAGAGTGGGACGCACGGCGCCATGCCCTTAC 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 38054
SOFWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 35056
LENGTH: 383
                                                                                                                                                                                                                                               RESULT 10
US_09-918-995-35056
Sequence 35056, Application US/09918995
Publication No. US20030073623A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; NAME/KEY: misc_feature
; LOCATION: (1)...(383)
; OTHER INFORMATION: n = A,T,C or G
US-09-918-995-35056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 95.1%;
Matches 349; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGTGG 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGTGG 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          309
1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                          g
                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                  g
```

```
1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1079 ATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGT 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780 TCCTGAAGCTGGCGGTCCCCAATCACCTCATCTGGCTCATCTTCTACTGGCTCTTCC 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGGCCCCCTCTGTGTTTCTTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies FILE REFERENCE: P2021 Nucleic Acids, Proteins, and Antibodies CURRENT APPLICATION NUMBER: US/09/764,853
CURRENT FILING DATE: 2001-01-17
Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 939
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 993,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 95; DB 10; Length 99
Pred. No. 3.7e-18;
0; Mismatches 125; Indels
                                                               TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED TITLE OF INVENTION: FROM VARIOUS CONA LIBRARIES CURRENT APPLICATION NUMBER: US/09/918,995 CURRENT FILING DATE: 2001-07-30 PRIOR PAPLICATION NUMBER: US/09/235,076 PRIOR FILING DATE: 1999-01-20 NUMBER OF SEQ ID NOS: 38054 SOFTWARE: FASESEQ FOR Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGG 1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 138.8; DB 9
Pred. No. 2.4e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           288 GCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGG 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches.
Sequence 32388, Application US/09918995
Publication No. US20030073623A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 79, Application US/09764853
Patent No. US20020090672A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; LOCATION: (1)...(471); OTHER INFORMATION: n = A,T,C or G US-09-918-995-32388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 92.4%;
Matches 146; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 6.1
Best Local Similarity 58.7
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-764-853-79
                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-764-853-79/C
                                                                                                                                                                                                                                                                                                                    SEQ ID NO 32388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

ö

÷

1139 ACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATG 1198

RESULT 11

9

```
Sequence 14, Application US/10157855 Patent No. US20020170091A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1319 TCGTCCTGGGGTTCTTC 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1207 TCCCTCTGCGAATGTTC 1223
956 TCCCTCTGCGAATGTTC 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-764-868-587
                                                                                                                                          US-10-157-855-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGIH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
       QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCT 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTEGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATG 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTEGECTETACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1079 ATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG 1138
                                                                                                                                                                                                                                             1259 GGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCT 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             782 Acresisca Ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              487
       660 ACTGGTGGAACTCCGAGTCTGTGCACTTCTGGCAGAACTGGAACATCCCTGTGCACA 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGGTGCATCAGACACTTCTACAAGCCCATGCTTCGAC-----GGGGCAGCAGCAAGT
                                                                                                             1199 ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAG
                                                                                                                                                                                                                                                                                       600 AGTGGTGCATCAGACACTTCTACAAGCCCATGCTTCGAC-----GGGGCAGCAGCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Cases, Sylvaine
APPLICANT: Cases, Sylvaine
APPLICANT: Smith, Steven
APPLICANT: Diacylglycerol O-Acyltransferase
FILE REPERBENCE: UCAL-105CIP2
CURRENT PILING DATE: 2002-10-16
CURRENT PILING DATE: 2001-10-29
PRIOR FILING DATE: 1998-11-09
PRIOR FILING DATE: 1998-11-09
PRIOR FILING DATE: 1998-08-28
PRIOR FILING DATE: 1998-08-28
PRIOR APPLICATION NUMBER: 09/103,754
PRIOR FILING DATE: 1998-06-24
PRIOR APPLICATION NUMBER: 09/103,754
PRIOR APPLICATION NUMBER: 09/39,472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 4.2e-18;
0; Mismatches 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/10273438 Publication No. US2003007275781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCGTCCTGGGGTTCTTC 1335
                                                                                                                                                                                                                                                                                                                                                                                          1319 TCGTCCTGGGGTTCTTC 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                          486 TCCCTCTGCGAATGTTC 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 58.7
36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: homo sapiens
US-10-273-438-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Simi
Matches 186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-273-438-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                    g
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                          δλ
                                                                                                                 ò
```

```
GENERAL INFORMATION:

APPLICANT: Lassner, Michael W.

APPLICANT: Lassner, Michael W.

APPLICANT: Lassner, Michael W.

APPLICANT: Ruezinsky, Diane M.

TITLE OF INVENTION: Acid Sequences

FILE PERERNE: 16516.158

CURRENT APPLICATION NUMBER: 08/10/157,855

CURRENT FILING DATE: 2002-05-31

PRIOR PPLICATION NUMBER: 09/326,203

PRIOR APPLICATION NUMBER: 60/088,143

PRIOR APPLICATION NUMBER: 60/088,143

PRIOR APPLICATION NUMBER: 60/108,389

PRIOR APPLICATION NUMBER: 60/108,389

PRIOR PILING DATE: 1999-10-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1139 ACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATG 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1033 ACTGGTGGAACTCCGAGTCTGTCACTACTTCTGGCAGAACTGGAACATCCCTGTGCACA 1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1199 ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1147 GGATGGCCAGGACAGGGGTTTCTTCCACGAGTACCTGGTGAGGG 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                913 TCCTGAAGCIGGGGGTCCCCAATCACCTCATCTGGCTCATCTTCTTCTACTGGCTCTTCC 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1079 ATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1259 GGGTAGCCATGCTGGGTGTTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 5877 Application US/09764868
Patent No. US20020168711A1
GENERAL INFORMATION:
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PT232
CURRENT APPLICATION NUMBER: US/09/764,868
CURRENT FILING DATE: 2001-01-17
Prior application data removed - refer to PALM or file wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 95; DB 9; Le
Pred. No. 4.7e-18;
0; Mismatches 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; LOCATION: (209)
; OTHER INFORMATION: n at position 209 is unknown
US-10-157-855-14
```

```
1019 TCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCC 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1079 ATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGG 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGGTGGAACTCAACGTCCTTCTCCAACTACCGCACTTGGAACGTGGTGGTCGTG 1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCCATGAGTATATCTTCTGCT 1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGGCTCCTTGGTGCCCGGGCCCGAG 1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 54 TCCTGAAGCTGGCGGTCCCCAATCACCTCATCTGGCTCATCTTCTACTGGCTCTTCC 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                288 GGATGGCCAGGACAGGGGTGTTCCTGGCCTCGGCTTTCTTCCACGAGTACCTGGTGAGCG 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174 ACTGGTGGAACTCCGAGTCTGTCACTTCTGGCAGAACTGGAACATCCCTGTGCACA 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     234 AGTGGTGCATCAGACACTTCTACAAGCCCATGCTTCGAC-----GGGGCAGCAGCAGT 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 6.0%; Score 93.8; DB 9; Length 542; Best Local Similarity 58.8%; Pred. No. 6.6e-18; Matches 183; Conservative 0; Mismatches 122; Indels
                                                                                            TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: SITE
LOCATION: (377)
OTHER INFORMATION: n equals a,t,g, or c
NAME/KEY: SITE
LOCATION: (397)
OTHER INFORMATION: n equals a,t,g, or c
NAME/KEY: SITE
LOCATION: (441)
OTHER INFORMATION: n equals a,t,g, or c
NAME/KEY: SITE
LOCATION: (441)
                                                                                                                                                                                                                                                                                                                                                                                                             : LOCATION: (507)
; OTHER INFORMATION: n equals a,t,g, or c
US-09-764-868-587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Search completed: April 30, 2003, 15:30:40 Job time : 152 secs
                       SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 587
LENGTH: 542
NUMBER OF SEQ ID NOS: 1510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1319 TCGTCCTGGGG 1329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
```

(OTARU) WWALL IDAY SIHT

```
BG105756 602311984
AA41002 ESY021318
AA466137 BP230022A
BE0013268 123187 MA
BE0013268 123187 MA
BE08778 LVIGEO9. T
BE861030 U.M-API-
BC968277 602269663
R10272 yf36b09. T
R181841 UN87N09. T
AVA5587 85867 MAR
BE026601 db28h02. X
BG105795 602312644
AL773907 AL773907
BE025601 db28h02. X
BG105795 602312644
BW485622 pgmlc. pk0
BE025829 db28h02. Y
BR7307 AL773907
BW485622 pgmlc. pk0
BW485622 pgmlc. pk0
BW485622 pgmlc. pk0
BW485622 bgmlc. pk0
BW485622 bgmlc. pk0
BW485632 bgmlc. pk0
BW485682 bgmlc. pk0
BW485682 bgmlc. pk0
                                                   A1049480 ub37e11.r
AU099137 AU099137
BG500675 602547068
AA867128 vx23f10.r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BI222037 . 799 bp mRNA linear EST 11-JUL-2001
602935989F1 NCI_CGAP_L19 Mus musculus CDNA clone IMAGE:5099063 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Tissue Procurement: Jeffrey E. Green, M.D.
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CLONG distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLAM11238 row: b column: 24
High quality sequence start: 28
High quality sequence start: 28
High quality sequence start: 28
Location/Qualifiers
                   A867129 vx23f11.r
BG696168 602659280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Musiai (bases 1 to 799)
I (bases 1 to 799)
NIH-MGC http://mgc.ncl.nih.gov/
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                               BF681650 602155732
BG698372 602658292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W76421 zd67e12.rl
BJ014628 BJ014628
R07295 yf14e10.rl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                       AW425878
BE026601
BG105795
                   AA867129
BG696168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BJ019808
BJ028057
                                                                                                                                                                                                                                                                                             BQ887458
                                                       AI049480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BI222037.1 GI:14675481
                                                                                                                                                                                                                                                        9140
                                                                                                                                                                                                                                                                                                                                                                                                                                         10
10
12
9
                                                                                                                                                                                                                                     420
484
553
878
608
601
601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
BI222037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         house mouse.
                                                                                                                                                                                                 246.2
246.2
246.2
241.6
233.8
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
222.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 1
BI222037
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                    BE236762 145578 MA
BG920709 602824607
BG105735 602311957
BG674469 602620487
BG529751 602560622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BI222037 602935989
                                                                                                                                                (without alignments)
15871.779 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                       1 atggagccaggcgggcccg.......ttggtcctgccatacctag 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                           April 30, 2003, 13:03:20 ; Search time 1601 Seconds
                                                                                                                                                                                                                                                                                                                                                                 32308132
                 GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                             16154066 segs, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                               hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                         OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE236762
BG920709
BG105735
BG674469
BG529751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BI222037
                                                                                                                                                                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_gss_vrt:*
em_gss_fun:*
em_gss_mam:*
                                                                                                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           em_gss_other
em_gss_pro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_est3:*
gb_est4:*
gb_est5:*
em_estfun:*
em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_gss_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_gss_inv:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_gss_pln:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            em_gss_mus:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_gss_rod:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13
10
12
12
12
                                                                                                                                                                                            US-09-918-026A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_esthum:*
em_estin:*
em_estmu:*
em_estcov:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_estpl:*
em_estro:*
em_htc:*
gb_estl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gb_est2:*
gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  563
705
992
840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :ssb_dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21.4
19.0
17.9
17.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of
                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               402.4
335.8
298.2
281.6
272.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                   Title: Perfect score:
                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Result
No.
```

source

BASE COUNT ORIGIN

85

a õ g õ g ŏ g ð g ò g ò

ò

```
Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
T=1: 402 762 4390
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
and -minmatch 12 options.
                                                                                 1 (bases 1 to 563)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Waray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and Keele, J.W.
                                               Chordata, Craniata, Vertebrata, Euteleostomi,
Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
                                                                                                                                                                                                           Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001) 21180013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGGGCTG 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             428 GICGCCGGCCIGTGTCTTCATCATCAGCACCTGGCCATCGACCTCATTGATGAGGGC 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pcMV SPORT6; Site_1: NotI; Site_2: Sa
Library made from pooled tissue from day 20 and day
embryos."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               382 ATCGCTGGCTGTGTCTTCATCATCAGCACCCTGGCCATCGACTTCATTGATGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82 GGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202 ATGCGGGGGGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCACCTCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     262 GGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCATCATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 563;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9e-68;
ss 63; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 335.8; L
Pred. No. 5.9e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Bos taurus"
/db_xref="taxon:9913"
/clone_lib="MARC 4BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: 55 row: 0 column: 15
Seq primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="pooled"
/lab_host="DH10B"
                                                   Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Cetartioda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BACKWARD: GTTTTCCCAGTCACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21.4%;
85.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best_Local Similarity 85.6
Matches 373; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                               REFERENCE
                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
KEYWORDS
                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 25-APR-2001
                                                                                                                                                                                                                                                                                                     3;
                                                               /db_xrel="raxun.xvvv"
/clone="IMAGE:5099063"
/clone=lib="NCI_CGAP_Li9"
/lab_host="DH10B (T1 phage-resistant)"
/note="Organ: liver; Vector: pcMv-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.9 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           192
                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         313 ATGGGAGGCTATGCAAGCTTACCCCAAACAAGACAGACCTCTTCCCTCCGCTGCCCCAGA 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TICCTIGAGCAGGACCCAGGAGCCAICCCIGGGGAAACAGAAAGIITICAICAICCGCAA 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GICCCIGCTIGATGAGCIGATGGAGGTGCAGCATTICCGCACCAICTACCACATGTICAT 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   384 CGCTGGCCTGTGTGTCTTCATCATCACCACCTGGCCATCGACTTCATTGATGAGGGCAG 443
                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                           84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCTGGGTGCCCATGTTCTGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               564 GGCCA-------GGGGCACCTGGACGCAGGCGACGGCCTGGGCTGTGCGCTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCCAGGCGCGCGCGCGGGGGCCTGCTGCTGGGGGCCTGCTACTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       612 AGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCGACGTGGCCGTGGAGCATCAGCT
                                                                                                                                                                                                                                                                                                                                         28 CTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGGGAGCGCCCAACCCTGT---GGAGATGGA
                                                                                                                                                                                                                                                                                                                                                                 AACACTGAGACGCAC-AGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                       204 GCGGGAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCACCTCCCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             144 GAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCAT
                                                                                                                                                                                                                                                                                                       16;
                                                                                                                                                                                                                                                               Score 402.4; DB 13; Length 799;
Pred. No. 1.8e-83;
0; Mismatches 126; Indels 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE236762 563 bp mRNA linear 145578 MARC 4BOV Bos taurus cDNA 5', mRNA sequence. BE236762
                   /organism="Mus musculus"
/strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                 Query Match 25.6%;
Best Local Similarity 78.7%;
Matches 524; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCGAC, 798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCGCC 677
                                                                                                                                                                                                               176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
BE236762
LOCUS
DEFINITION
ACCESSION
VERSION
```

264

324 433 444 553 504 613

g ŏ 셤

673

g

ò

δ g 672

g ŏ

δy

ó;

Gaps

ô

201

261 307 321 367 441

GI:9021480

BE236762.1

Sall;

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
BG105735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                        g
                                                                                                                                                                                                      αq
                                                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δy
                                                                                 οy
                                                                                                                         g
                                                                                                                                                              Ω
                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                            οχ
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                 BG920709 778 bp mRNA linear EST 05-JUN-2001 602824607F1 NCI_CGAP_Mam6 Mus musculus cDNA clone IMAGE:4953408 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Jeffrey Green, M.D., NIH"
                                                                                                                                                                                                                                                                                                                                                                                                 NIH WGC http://wgc.ncl.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
Lupublished (1999)
Lupublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
CONA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: McG. Consortium (LLNL)
DNA Sequencing by: The I.M.A.G.E. Consortium (LLNL)
Clone distribution: McC. clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10912 row: n column: 01
High quality sequence start: 15
High quality sequence start: 15
High quality sequence start: 15
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 778)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             976 ATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTG 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    111 TACCCAAGGACTCCTACTGTAAGATGGGGTTATGTCGCTATGCAGGTTTTACAGGTGTTT 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 171 GGCTGCCTGTTTTATGTGTACTACATCTTTGAGAGACTCTGTGCCCCACTATTCCGGAAT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  488 AGGCTGATGATGGANTTCGATCTACTGACCTTCAGCTTCGGACAGCTGCCCTTGGCTCTG 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             796 CCCAGITICICCAGCIACCICIACITICCICTICIGCCCAACACICATCIACAGGGAGACI 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51 CCCACAGTCAACCAGTACCTGTACTTCCTGTTTGCGCCTACACTTATTTACCGAGACAAC 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            856 TACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCCAGGCCCTG 915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              916 GGATGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAAC 975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13; Length 778;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="Index:4953408"
/clone=lib="NCI_CGAP_Mam6"
/sex="female, virgin"
/tissue_type="infiltrating ductal carcinoma"
/lab_host="bH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 298.2; DB 13; Length
Pred. No. 4.2e-59;
0; Mismatches 243; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="FVB/N"
                                                                                                                                                                                                                                                                  BG920709.1 GI:14301185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 19.0%;
Best Local Similarity 65.1%;
Matches 455; Conservative
                                        502 GTGACCTGGGTGCCCA 517
                                                                               548 GTGACGTGGGTCCCCA 563
                                                                                                                                                                                                                          mRNA sequence.
BG920709
                                                                                                                                                                                                                                                                                                         house mouse.
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        231
                                                                                                                                           RESULT 3
BG920709
                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                        ð. a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
```

```
/organism="Homo sapiens"
/db_xref="taxon:9666"
/clone="lmAGE:441654"
/clone="ln="KHHMGC_84"
/tissue_type="adrenal cortex carcinoma, cell line"
/tissue_type="adrenal cortex carcinoma, cell line"
/lab_host="bH108 (phage-resistant)"
/note="Organ: adrenal gland; Vector: pCMV-SPORT6; Site_1:
NotI; Site_2: SalI; Cloned unidirectionally; oligo-dT
primed. Average insert size 1.239 kb. Library enriched for full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /US bp mRNA linear EST 30-JAN-2001
602311957F1 NIH_MGC_84 Homo sapiens cDNA clone IMAGE:4421654 5',
mRNA sequence.
BG105735.
BG105735.1 GI:12599581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens Sukaryota: Chordata; Craniata; Vertebrata; Buteleostomi; Bukaryota: Metazoa; Chordata; Catarrhini; Hominidae; Homo. 1 (bases 1 to 705) Natl-MGC http://mgc.ncl.nlh.gov/. Natl-MGC http://mgc.ncl.nlh.gov/. Natlonal Institutes of Health; Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1454
1036 CCAGGCATCTTCATGCTGCTGCTCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCC 1095
                                                                                                                                                                                                                                              1156 TCCTTCTCCAACTACTACGGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTAC 1215
                                                                                                                                                                                                                                                                                                                                                                    1216 GTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGT 1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1336 TATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCAT 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      con Library Preparation: Life Technologies, Inc., con Library Preparation: Life Technologies, Inc., con Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov a column: 15 High quality sequence stop: 694.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1096 TTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACG
                                                                                                                                                                                                                                                                                 1276 GTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1396 GACCAGC-GCACCGGCCCGGCATGGAACGTGATGTGGACCATGCTGTTTCTAGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1455 GGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGC 1493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
1..705
```

Query Match

ð g à g ò QQ QΥ 염

1023

1083

ò

240

a ò g οy

180

1143

300

1203

360

qq ò . qq ò qq δy

420 1323

BASE COUNT

ORIGIN

```
/note="Organ: skin; Vector: PCMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT Average insert size 1.5kb. Library constructed by Life Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGC 1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1081 TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1141 IGGTGGAACTCAACGTCCTTCTCCAACTACCGCACTTGGAACGTGGTGCTGTGAC 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1201 TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGG 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1261 GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC 1320
            Tissue Procurement: James Cleaver, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DI
Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can i
found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov.

Plate: LLAM10593 row: n column: 22

High quality sequence stop: 828.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1321 GICCIGGGGIICTICIAICCCGICAIGCIGAIACICIICCIIGICAIIGGAGAAIGIIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1381 AACTICATGATGCATGACCAGCGCACCGGCCTGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422 IGCTTGAGCCTTTTCTATCCCGTGCTCTTCGTGCTCTTCATGTTCTTTGGAATGCCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACTICATIGICAAIGATAGICGGAAAAAGCCGAITIGGAAIGITCIGAIGIGGACTICI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62 CCCTIGITICGGAATATCAAACAGGAGCCCTTCAGGGCTCGTGTTCTGGTCCTATGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1441 CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACTGICCICTGAAAAATCCCACAITTITGGAITAATGICCGGCCACGTICCTGGACTIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901 TITGCCCAGGCCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961 CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021 CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182 IGCIGGCTCAATGCCTTTGCTGAGATGTTACGCTTTGGTGACAGGATGTTCTAAAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242 TGGTGGAACTCCACGTCATACTCCAACTATATAGAACCTGGAATGTGGTCGTCGTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:4746069"
/clone_lib="NCI_CGAP_Skn3"
/lab_host="DH10B (TI phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 272.6; DB 12;
pred. No. 4.6e-53;
0; Mismatches 244;
                                                                                                                                                                                                                                        /organism="Homo sapiens"/db_xref="taxon:9606"
cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 63.2%;
Matches 419; Conservative
                                                                                                                                                                                                                         1. .992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAT 1563
                                                                                                                                                                                                                           Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    482
                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΫ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BG674469 11near EST 01-MAY-2001
602620487F1 NCI_CGAP_SKn3 Homo sapiens CDNA clone IMAGE:4746069 5',
                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

(Dases 1 to 992)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAA 1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCA 1502
                                                                                                                                                                                                                                                                                                                                                                                      GCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCTTCTTTGTTGCCTTCCTCCATTG 1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTG 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGT 1262
                                                                                                                                                                                                                                                                                                          1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 239
                                                                                                                                          843 CTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTT 902
                                                                                                                                                                                                                           962
                                                                                                                                                                                  9
                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1263 AGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGT
                                                                                                                                                                                                                                                               61 recacagercringeriecrititiciarereraciacititicaaagecrigecece
                                                                                                                                                                                                                                                                                                                                                                                                                TAACTCCATCTTGCCAGGTGTGCTGATTCTCTTCCTTACTTTTTTGCCTTTTTTGCACTG
                                                                                                                                                                    903 IGCCCAGGCCCTGGGAIGTGTGTGTTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCC
                                                                                                                                                                                                                                                                                                          963 IGTCTTTGCCAACATGAGCCGAGGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCT
                                                                                                                                                                                                                                                                                                                               ;
                                                                  Length
                                                                                                      Indels
                                                               12;
                                                                  Score 281.6; DB 12;
Pred. No. 3.1e-55;
0; Mismatches 244;
                                                               281.6; DB 1
No. 3.1e-55;
        258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CIGCCCCTTACCCCAGGCAACTTT 1526
          b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTCCTCTGAAAATCCACATTT 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BG674469.1 GI:13905865
                                                               17.9%;
nilarity 64.2%;
Conservative (
          υ
          155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA sequence.
BG674469
                                                                                       Similarity
          ú
          139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                         Best Local Sim
Matches 439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
```

1440

1380

481

421

361

301

1500

KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS TITLE JOURNAL

DEFINITION

LOCUS

RESULT 5 BG674469

ACCESSION

VERSION

1503 • 660

1383

qq

1443

õ

g δ g 661

ö

; 0

Length 992; Indels 61

1080

```
CTGCTGCTCA-TCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCCGAGATGCT 1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:12790932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prime, mRNA sequence.
AL527439
AL527439.1 GI:127909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCTGG 1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             732 TTTTGG 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                    1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1525
      1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
AL527439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                           pp
                                                                                    δ
                                                                                                                       g
                                                                                                                                                                    ŏ
                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                         QQ
                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                           Dρ
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /ncte="Organ: testis; Vector: pDNR-LIB (clontech); Site_1: Sfil (ggccgctcggcc); Site_2: Sfil (ggccattatggcc); Double-stranded cDNA was prepared from cell line RNA. 5 and 3' adaptors were used in cloning as follows: 5' adaptor sequence: 5'-CACGCCCATATGGCC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGCGCATATGGCC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGCGCATATGGC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGGCGCATATGGC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGCGCATATGGC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGCGCATATGGC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGGCGCATATGGC-3' and 3' adaptor sequence: 5'-ATTCTAGAGGCGAGGGGCGCATATGGC-3' and 3' adaptor sequence: 1.75 kb trange 0.9-4.0 kb). 15/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3;
                                                                                                       BG529751 840 bp mRNA linear EST 03-APR-2001 602560622F1 NIH_MGC_61 Homo sapiens cDNA clone IMAGE:4698748 5',
                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 80). NIH-WGC http://mgc.nci.nih.gov/. NIH-WGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGCATCTTCATG 1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA Library Preparation: CLONETECH Laboratories, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM1529 row: k column: 05
High quality sequence stop: 764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               871 TATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTGTGTCTCTAT 930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 811 TACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGACGCCC 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTTTGCCAACATGAGCCGAGAGCCC 990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          132 GTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAACAGGAGCCC 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 TATTIGIACTICITATITGCICCTACCTIATCIACCGIGACACCIATCCCAGGAATCCC 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 840;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 268; DB 12; Length B
Pred. No. 5.1e-52;
0; Mismatches 260; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="embryonal carcinoma"
/lab_host="DH10B (T1 phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Emall: cgapbs-r@mail.nlh.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="IMAGE:4698748"
/clone_lib="NIH_MGC_61"
                                                                                                                                                                                       BG529751.1 GI:13521288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 63.4%;
Matches 460; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . . 840
                                                                                                                                                   mRNA sequence.
BG529751
                                                                                                                                                                                                                                                      Homo saptens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  163
                                                                                                                                                                                                                                     human.
    664
662 CGT
                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 991
                                                                RESULT 6
BG529751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
/note="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies. Contact: Feng Liang Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL527439 LTI_NFL003_NBC3 Homo sapiens cDNA clone CSODC021XJ22 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                     1170 CTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGG 1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1350 GATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGCGCAC-CG 1408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1409 GCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGA----TCCAG 1464
                                                                                                                                                                             ACGATTTGGACACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTA 1169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCACTGCCCCTTACCCCAGGCAACT 1524
                                                                                                                                                                                                                                                                                           371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (base) Longerator of the control of 
372 TTATAGAACCTGGAATGTGGTGGTCCATGACTGGCTATATTACTATGCTTACAAGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1230 GCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCCTGGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1290 CGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   492 TGCTGTAGTACACGAATATGCCTTGGCTGTTGCTTGAGCTTTTTCTATCCCGTGCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="neuroblastoma cells"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="LTI_NFL003_NBC3"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CSODC021YJ22"
```

```
source
          LOCUS
                                                                  VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                    TITLE
JOURNAL
COMMENT
                                                                                                                                                AUTHORS
                                                        ACCESSION
                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                              FEATURES
 4A867129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                     .;
m
Medical Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTGGTCCATGACTGGCTGTACAGCTACGTGTATGAGGGTGCGGGTTCCTTGGTGC 1247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGT 1187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCT 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGCTCTCTATCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTT 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   629
                                                                                                                                                                                                                                                                                                                                                                                                                                                        947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      433 GATGAGGGCAGGCTGCTGCTGGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCA 492
                                                                                                                                                                       552
                                                                                                                                                                                                                 612
                                                                                                                                                                                                                              654
                                                                                                                                                                                                                                                                                                        714
                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                    774
                                                                                                                                                                                                                                                                                                                                                                          359
                                                                                                                                                                                                                                                                                                                                                                                               827
                                                                                                                                                                                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                                                                                            887
                                                                                                       Gaps
                                                                                                                                                1 GATGAAGGAAGGCTGGTGCTTGAGTTCAGCCTCCTGTCTTATGCTTTTGGCAAATTTCCT 60
Technologies, a division of Invitrogen 9800 Medical Drive Rockville, Maryland 20850, USA Fax: (1) 301 B371 Email: fliangelifetech.com URL: http://fulllength.invitrogen.com" 8 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     493 TTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCCGTACCAGGCC
                                                                                                                                                                                  CTACGGCTGTGGGCCAGGGCACCTGGACGCCAGGCGACGGGCCTGGGCCTGTGCCCTTTTA
                                                                                                                                                                                                                                                                                  181 CATGGCTTTCTTTTCATGATCTTCCAGATTGGAGTTCTAGGTTTTGGACCAACATATGTT
                                                                                                                                                                                                                                                                                                                    241 GIGTIAGCATARACACTGCCACCAGCTTCCCGGTTCATCATATATTTGAGCAGATTCGT
                                                                                                                                                                                                                                                                                                                                                    715 TICCIGAIGAAAAGCIACICCIICCIGAGAGAGGCIGIGCCIGGGAICCIICGIGCCAGA
                                                                                                                                                                                                                                                                                                                                                                  775 CGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCAG-----CTACCTCTACTTCCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                            828 CTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGAT
                                                                                                                                                                                                                                                                                                        GCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTTGTGTCCTGGTCTTCGAGCAGGTTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGGGCCCGAGGGGTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCA 1301
                                                                                                     26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840 GAGATTCAAATCTGCTGCCATGTTAGCTGTTTGCTGTATCTGCTGTAGTACA
                                                                     ; DB 9; Lc...
. 4.5e-51;
.~s 341; Indels
                                                                               Length 893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    =
                                                                               Score 264; DB 9
Pred. No. 4.5e-5
6; Mismatches 3
                                                                                                                                                                                                                                                              613 GCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCC--
                                                                                Ouery Match 16.8%;
Best Local Similarity 58.3%;
Matches 521; Conservative
                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                           655
                                                  BASE COUNT
                                                                                                                                                                                                                    553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                           .g
                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                    q
                                                                                                                                                                                             q
                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                               ò
                                                                                                                               ð
                                                                                                                                                                          ò
```

RESULT 8

```
.;
0
                                                                                                                                                                      Mus musculus
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 694)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba.T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K.; Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
    EST 16-MAR-1998
AA867129 cvx3f11.rl Soares_thymus_2NbMT Mus musculus cDNA clone IMAGE:1265325 5' similar to gb:L42293 Mus musculus acyl-coenzyme A:cholesterol acyltransferase (MOUSE);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1116 TGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCÄACTACŤACFG 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1056 GCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCCGAGATGCTACGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           936 CTICATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122 CCTTTGFTCTTTTGCTTTTTGCACTGCTTGCTTTTGCTGAGATGTTACGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="InAGE:1265325"
/clone=lib="Soares_thymus_2NbMT"
/sex="male"
/tissue_type="Thymus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 246.2; DB 9;
Pred. No. 5.9e-47;
0; Mismatches 218;
                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Lo
Fax: 314 286 1800
Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            primer: -28m13 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                   The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: -28mls lev. ...
High quality sequence stop: 441.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev_stage="4 weeks"
/lab_host="DH10B"
                                                                                                      AA867129.1 GI:2962574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 15.7%;
Local Similarity 63.4%;
Les 377; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .694
                                                                                                                                                     house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
```

4

us-09-918-026a-3.rst

```
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Waterston, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                       1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
AI049480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                   902
                                                                                                           72
                                                                                                                                                                                                                                                                                                                                    1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1502
                                                                               962
                                                                                                                                                                                                                                       191
                                                                                                                                                                                                                                                                                                                                                                    311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                   pp
                                                                                                                                                                                                                                                                                                                                                               QQ
                                                                                                                                                                                                                                                                                                                                                                                                                              Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                g
                                                                                                                                                                         g
                                                                                                                                                                                                                                                                     δy
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                Óλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                               à
                                                                                                           qq
                                                                                                                                           ò
                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               p mRNA linear EST 07-MAY-2001 sapiens cDNA clone IMAGE:4802563 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="IMAGE:802563"
/clone_lib="NOI_CGAP_Skn3"
/lab_most="DH10B (T1 phage-resistant)"
/note="Organ: skin; Vector: pcMv-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.5kb. Library constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Euteleostomi;
                                                                                                                                                                                                                                    1355
                                                                                                                                                                                                                                                                                                   1416 ATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTA 1475
                                                                                                           1236 GCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGT 1295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-remail.nih.gov
Tissue Procurement: James Cleaver, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA
Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC.clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLANLOGOF row: pc. column: 20
High quality sequence start: 5
High quality sequence stop: 738.
182 TGGTGACAGGATGTTTTATAAGGACTGGTGGAACTCTACATCATACTCCAACTACTACAC 241
                                                                242 GACCTGGAACGTGGTGCACGACTGGCTCTACTACTATTTACAAAGACCTGCTCTG 301
                                                                                                                                            361
                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleoston Mammallai; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 741)
NIH-MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                 482 CTCGAACATCACGGTTTGGGCTTCTCTTGTTCCTGGGCTATGGACTCATTCTGTGCTTTTA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                            GGCCCATGAGTATATCTTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACT
                                                                                                                                                                                           CACTTGGAACGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCG
                                                                                                                                            GTTTTTCTCGAAGAGGTTCAAATCTGCCGCCATGCTGGCCGTCTTCGCCCTGTCGCTGT
                                                                                                                                                                                                                                                                                                                                                                  CTGCCAGGAGTGGTACGCACGGCGCACTGCCCCTTACCCCAGGCAACTTTCTGG 1530
                                                                                                                                                                                                                                                                                                                                                                                   GTCTCAAGAGTGGTATGCCGCCAGCACTGTCATCTGAAGAACCTACATTTCTGG 596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.6%; Score 245; DB 12; Length 741;
llarity 63.9%; Pred. No. 1.2e-46;
Conservative 0; Mismatches 225; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               741 bp
602659280F1 NCI_CGAP_Skn3 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence.
BG696168
BG696168.1 GI:13961039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
BG696168
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                         1296
                                                1176
                                                                                                                                           302
                                                                                                                                                                                                        362
                                                                                                                                                                                                                                      1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                      ò
                                                                             g
                                                                                                                                       g
                                                                                                                                                                         ò
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                ò
                                                                                                           ò
```

```
ub37ell.rl Soares_thymus_2NbMT Mus musculus cDNA clone IMAGE:1379948 5' similar to 9b:L21934 STEROL O-ACYLTRANSFERASE (HUMAN); 9b:L42293 Mus musculus acyl-coenzyme A:cholesterol acyltransferase (MOUSE); mRNA sequence.
AI049480.1 GI:3297767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dubuque, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1441
                                                                                                                                                                                                                     1022 TGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTTTGCCTTCCTCCATT 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACT 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGG 1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1322 TCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGA 1381
                                                                                                                                                                                                                                                                                                                                                           CTGCCATGTTAGCTGTTTGCTGTATCTGCTGTAGTACACGAATATGCCTTGGCTGTT 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTGTTTCGGAATATCAAAACAGGAGCCCTTCAGCGCTCGTGTTTTGGTCTTGTGTAT 131
961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
1 (bases 1 to 731)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubu
Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B.,
Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCC
                                                                                                                                                                                                                                                                                                                                 GCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1262 TAGCCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGC
TTGCCCAGGCCCTGGGATGTGTGCTTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTTC
                                                                                                                                                                                                                                                                            MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
WashIngton Park Parkway, Box 8501, St. Louis,
Tel: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGCCCCTTACCCCAGGCAACTTTCTGG 1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The WashU-HHMI Mouse EST Project
```

```
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                  human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
BG500675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
                                                        RESULT 11
AU099137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="Thymus"
/dev_stage="4 weeks"
/lab_host="DHJDAD-Pac (Pharmacia) with a modified
/note="Vector: pT/T3D-Pac (Pharmacia) with a modified
/note="Ve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. RNA provided by Dr. Bertrand Jordan. Library went through two rounds of normalization, and was constructed by Bento Soares and M.Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCGAGATGCTACGATT 1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1116 TGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCCAACTACTACCG 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1176 CACTIGGAACGIGGIGCICCAIGACIGGCIGIACAGCIACGIGIAICAGGAIGGGCIGCG 1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTTCCTGGTCTCCGCAGT 1295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCGTCATGCTGATACT 1355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGC-GCACCGGCCCGG 1414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGT 1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information. MGI:902416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITCATGITCITIGGAATGGCTTTTTACTTCATTTGTAACGACAGTCGGGAAAAGGCCAA 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130 CCTITCGTTTGCCTTTTTGCACTGCTGGCTCAATGCCTTTGCTGAGATGTTACGCTT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         936 CTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAG 995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGCCAGGAGTGGTACGCACGGCGCACTGCCCCTTACCCCAGGCAACTTTCTGG 1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     250 GACCTGGAACGTGGTGCACGACTGCTTCTACTTTACAAGACCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          490 rccregacarcarderrregecrrcrerrerregecrargeacrerrerrerr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190 TGGTGACAGGATGTTTTATAAGGACTGGAGCACTCTACATCATACTACTACTACTACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 CTACATCTTTGAGAGACTCTGTGCCCCCACTATTCCGGAATATCAAACAGGAGCCCTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           996 CACCCGTGCCCTGGTGCTCTGTATCCTGCATGCTACCTGCCAGGCATCTTCATGCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 241.6; DB 9;
Pred. No. 7.2e-46;
0; Mismatches 214;
                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="Soares_thymus_2NbMT"
                                                                                                                                 Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 313.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:10090"
/clone="IMAGE:1379948"
                                                                                                                                                                                                                                                                                                      /strain="C57BL/6J'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y Match · 15.4%;
Local Similarity 63.9%;
hes 381; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 381;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1475
                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
```

ö q ŏ g ò g

δŻ g ò QQ

ŏ

q δ 9 δ Ω δλ g οχ

```
Contact: Yutaka Suzuki
Department of Virology
Institute of Medical Science, University of Tokyo
Institute of Medical Science, University of Tokyo
Suzuki Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp
Suzuki,Y., Yoshitomo.Nakagawa,K., Maruyama,K., Suyama,A. and Sugano
Suzuki,Y., Yoshitomo.Nakagawa,K., Maruyama,K., Suyama,A. and Sugano
J. Construction and characterization of a full length-enriched and
a 5'-end-enriched cDNA library. Gene 200 (1-2), 149-156 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG500675 846 bp mRNA linear EST 27-MAR-2001 602547068F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:4669480 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suzukt,Y., Tsunoda,T., Taira,H., Mizushima-Sugano,J., Sese,J., Hata,H., Ota,T., Isogai,T., Tanaka,T., Nakamura,Y., Morishita,S., Okubo,K., Suyama,A. and Sugano,S.
In silico mapping of the 5' ends of human mRWAs using full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                    05-APR-2001
                                                                                                                                                    AU099137 AU099137 Sugano Homo sapiens cDNA library Homo sapiens cDNA clone HEP20912 similar to Homo sapiens acyl coenzyme A:cholesterol
                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Sugano Homo sapiens cDNA library"
/note="Differential display comparison of untreated and
dimethylfumarate treated U937 cells"
79 c 108 g 35 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGGACTTGGTACAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGAGCCAGGCGCGCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           enriched and 5' -end enriched cDNA libraries constructed by
605
                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 300)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
   550 ATTCTCAAGAGTGGTATGCCCGCCAGCACTGTCCTCTGAAGAACCTACATTTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 240; DB 9;
Pred. No. 1.1e-45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                             acyltransferase 2 mRNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 15.3%; Score 240; DB Best Local Similarity 100.0%; Pred. No. 1.1 Matches 240; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
/db_xref="taxon:9606"
/clone="HEP20912"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:13462192
                                                                                                                                                                                                                                                                                                         AU099137.1 GI:13550266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oligo-capping method
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
BG500675
BG500675.1 GI:
```

A

σ

```
source
                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                          1287
                                                                                                                                                                                                                                                                                                             RESULT 13
AA867128
                                                                                                                                                                                                                                      1466
                                                                                                                                                                                                                                                                  673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                             q
                                                          ò
                                                                                    a
                                                                                                                ò
                                                                                                                                               g
                                                                                                                                                                            ò
                                                                                                                                                                                                      g
                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                Dp
                                                                                                                                                                                                                                                                                                                   4,
                                                                                               Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: DCTD/The Gov
Tissue Procurement: DCTD/The Gov
Tissue Procurement: DCTD/The CLONETECH Laboratories, Inc.
CDNA Library Preparation: CLONETECH Laboratories, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MCC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.lln.gov
Plate: LLCM1481 row: g column: 17
High quality sequence stop: 684.
                Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             988 CCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTG-CATGCCACGTTGCCAGGCATCTT 1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAA 1166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1047 CATGCTGCTCCTCTTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCGAGAT 1106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          253 GATTCTCTTCCTTACTTTTTTGCCTTTTTGCACTGCTGGCTCAATGCCTTTGCTGGAT 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    811 TACGTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTAGGACGCCC 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             871 TATGT-CAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCT--GGGATGTGTGTGCTC 927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              928 TATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCCGAGG 987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193 CCCTTCAGCGCTCGTGTTCTGGTCCTATGTAACTCCCATCTTGCCAGGTGTGCT 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 313 GTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTCCACGTCATACTCCAA 372
                                           1 (bases 1 to out)
NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)......
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 TATTGTACTTCTTATTTGCTCCTACCCTTATCTACCGTGACGCTATCCCAGGAATCCC 72
                             Catarrhin; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 12; Length 846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 3.5e-45;
0; Mismatches 247;
               Chordata; Craniata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               302 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15.2%; Score 238.8; 63.2%; Pred. No. 3.5
                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
             Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
1 (bases 1 to 846)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                197 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 432; Conservative
                                                                                                                                                                                                                                                                              1. .846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                   Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
ORGANISM
                                         REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1167
                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
```

```
EST 16-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 887)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geissl,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptce,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                              CTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCAT 1346
                                                                                                                                                                                                                                                                                            1406 CCGCCCCGCCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGG 1465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
1227 TGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCCTGGT 1286
                                                                                                                                                                                             1347 GCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGC-GCA 1405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA867128

vx23f10.r1 Soares_thymus_2NbMT Mus musculus cDNA clone
IMAGE:1265312 5' similar to gb:L21934 STEROL O-ACYLTRANSFERASE
(HUMAN); gb:L42293 Mus musculus acyl-coenzyme A:cholesterol
                                                                                                                                                                                                                                             612
                                                                                                                                                                                                                                                                                                                        MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Soares_thymus_2NbMT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Waterston, R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 447.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
/clone="IMAGE:1265323"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="Thymus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="4 weeks"
                                                                                                                                                                                                                                                                                                                                                                                             TCAGCCTGTACTGCCAGGAGTGGT 1489
                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGCTTTTATTCCTCCAGGAGT 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA867128.1 GI:2962573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGI:667875
```

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BG697784
                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pan troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male BAC Library clone:PTB-145020.F. Pan troglodytes Pan troglodytes Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSS 04-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1484
                                                                                                                                                                                                                                                                                                                                                                                  1245 TGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGA 1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATTGGAGGAATGTTGAACTTCATGATGCATGACCAGGGCACCGGCCCGGCATGGAACGT 1424
                                                                                                                                                  1064
                                                                                                                                                                                                                                                                                                                          CGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGG 1244
                                                                                                                                                                                                                                                                                                                                                                                                                                             GTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGT 1364
                                                                                                                                                                                                          CITIGCCTICCTCCATIGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAG 1124
                                                                                                                                                                                                                                                                  1125 GATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAA 1184
                                                                                                                                                                                                                                                                                   Library went through constructed by Bento
                                                                                                                                                                              61
                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                            1425 GCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTTGGAATGGCTTTTAACTTCATTGTTAACGACAGTCGGAAAAGGCCAATCTGGAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482 GIGGIAIGCGCCCAGCACIGICCICIGAAGAACGCIACAIAICIGGAIIAIGICCGGCC
                                                                                                                                                                                                                         242 GAAGAGGTTCAAATCTGCCGCCATGCTGGACGTCTTCGCCCTGTCGGCTGTGGTGCACGA
                                                                                                                                                   1005 CCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTT
                                                                                                                                                                      2 CCTGGTCCTGTGTGTTTAACTCCATCTTGCCAGGTGTCTTGATACTGTTCCTTTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
BAC end sequences of Library PTB
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fujiyama, A., Hattori, M., Toyoda, A., Taylor, T.D., Yada, T., Totoki, Y., Watanabe, H. and Sakaki, Y.
                                                                                                                      ;
0
                                                                                          887;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                          Length
                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  635 bp DNA
Pan troglodytes DNA, clone: PTB-145020.F,
AG133295
provided by Dr. Bertrand Jordan.
rounds of normalization, and was
sozes and M.Fatima Bonaldo."
223 g 282 t
                                                                                        Score 233.8; DB 9;
Pred. No. 5.2e-44;
0; Mismatches 197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AG133295.1 GI:16662973
                                                                                           14.9%;
64.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 635)
                                                                                                        Best_Local Similarity 64.1
Matches 352; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1545 TCGATCTTG 1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542 GCGACCTGG 550
                                                 ø
                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
AG133295
LOCUS
                                                                                                                                                                                                             1065
                                                                                                                                                                                                                                                                                                                              1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                  122
                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΩD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δλ
                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                           οχ
                                                                                                                                                        δ
                                                                                                                                                                                 셤
                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                      ò
```

```
BG697784 1inear EST 07-MAY-2001
602661272F1 NCI_CGAP_SKn3 Homo sapiens CDNA clone IMAGE:4804481 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ij
and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mal1:chimpbes/egsc.riken.go.jp, WR:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC envas generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria; Primates, Catarrhini, Hominidae, Homo.

I (bases 1 to 848)

NIH-MGC http://mgc.nci.nih.gov/.

National institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Cleaver, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA
Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327 GCTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTCCACGTGGCCGTGGAGCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    147 AGGCTGCTGCTGGAGTTTGACTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442 AGGCTGCTGCTGCAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          609 TTTAGCCGCCCACGCCGTGGTGCTCTGCGCCGGTCCACGTGGCCGTGGAGCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----GGGCACCTGGACGCAGGCGACGGCCTGGGCTGTGCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 635;
                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="male"
/cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male BAC Library"
a 217 c 189 g 126 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCCCGCCGGCCTCCCGTTGTGTCCTGGTCTTCGAGCAGGTTAGG 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 227.6; DB 17;
Pred. No. 1.3e-42;
3; Mismatches 14; I
                                                                                                                                                                                                                                                                                                                                                                             /organism="Pan troglodytes"
/db_xref="taxon:9598"
/clone="PTB-145020.F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dq
                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence.
BG697784
BG697784.1 GI:13964385
                                                                                                                                                                                                                                                      pKS145
                                                                                                                                                                                                        Sequencing: -21M13
                                                                                                                                                          clone tracking errors.
                                                                                                                                                                                                                                                                                   SacI
SacI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14.5%;
90.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 14.5
Best Local Similarity 90.6
Matches 259; Conservative
                                                                                                                                                                                                                                                                                                                                                           1. 635
                                                                                                                                                                                                                                                            Vector
R.Site 1
R.Site 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                562 TGGGCCAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                              PRIMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103
                                                                                                                                                                                                                                    LIBRAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
```

```
ö
                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone_lib="NIS-480481"
/lab_bost="DH10B (T1 phage-resistant)"
/lab_bost="DH10B (T1 phage-resistant)"
/incte="Organ: skin; Vector: pCMV-SPORT6; Site_1: NotI;
/incte="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="organism="org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGG 1327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1028 CCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGC 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGA 1147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTCAACGTCCTTCTCCAACTACTACGCACTTGGAACGTGGTGGTCCATGACTGGCTGT 1207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCA 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCA 1387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGATGCATGACCAGCGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTC 1447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1448 TAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCC 1507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTACTATGCTTACAAGGACTTTCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCA 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1508 CCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCTGAAAATCCCACATTTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGT 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 222.4; DB 12; Length 848;
Pred. No. 2.4e-41;
0; Mismatches 196; Indels 0;
http://image.llnl.gov
Plate: LLMM10701 row: p column: 18
High quality sequence stop: 808.
Location/Qualiflers
1..848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 63.4 Matches 340; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304
                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

Search completed: April 30, 2003, 14:36:02 Job time : 1619 secs

THIS PAGE BLAMK (USPTO)

```
GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                     Minimum DB seq le
Maximum DB seq le
                                              OM nucleic - nuc
                                                                                                                                                                                                                                                                                          Post-processing:
                                                                                                     عا
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                              Total number of
                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                       Searched:
                                                                     Run on:
```

copyright (c) 1993 - 2003 Compagen Lca.	
ncleic search, using sw model	
April 30, 2003, 13:15:41; Search time 2498 Seconds (without alignments) 15792.059 Million cell updates/sec	
S-09-918-026A-3 569	
1 atggagccaggcgggggcccgcttggtcctgccatacctag 1569	
IDENTITY_NUC Gapop 10.0 , Gapext 1.0	59: /cgn2 60: /cgn2
24791104 seqs, 12571243825 residues	
f hits satisfying chosen parameters: 49582208	03: /Cgnz 64: /Cgnz
length: 0 length: 200000000	
g: Minimum Match 0% Maximum Match 100% Listing first 45 summaries	69: / C942 69: / C942 70: / C942 71: / C942
Pending_Patents_NA_Main:* 1: /cgn2_6/ptodata/1/pna/PCTUS_COMB.seq:* 2: /cgn2_6/ptodata/1/pna/PCTUS_COMB.seq:*	72: /cgn2 73: /cgn2 74: /cgn2 75: /cgn2
3: //ggn2_6/ptodata/1/pna/USON_COMB.seq:* 4: //ggn2_6/ptodata/1/pna/USON0_COMB.seq:* 4: //ggn2_6/ptodata/1/pna/USON0_COMB.seq:*	
5. /cgn2_o/ptodata/1/pna/uSvo1_coms.seq;* 6: /cgn2_o/ptodata/1/pna/uS082_cOMB.seq;* 7: /cgn2_o/ptodata/1/pna/uS083_cOMB.seq;* 7: /cgn2_o/ptodata/1/pna/uS083_cOMB.seq;*	79: /cgn2 / cgn2
<pre>. rcgni_o/ptodata/1/pna/rg085_COMB.seq:* 10: /cgn2_6/ptodata/1/pna/rg086_COMB.seq:*</pre>	
<pre>11: /cgn2_6/ptodata/1/pna/US087_COMB.seq:* 12: /cgn2_6/ptodata/1/pna/US088_COMB.seq:*</pre>	84: /cgn2 85: /cgn2
<pre>13: /cgn2_6/ptodata/1/pna/US089_COMB.seq:* 14: /cgn2_6/ptodata/1/pna/US090_COMB.seq:*</pre>	
<pre>15: /cgn2_6/ptodata/1/pna/US091_COMB.seq:* 16: /cgn2_6/ptodata/1/pna/US092_COMB.seq:*</pre>	score greater than o and is derived by an
<pre>17: /cgn2_6/ptcodata/1/pna/US093_COMB.seq:* 18: /cgn2_6/ptcodata/1/pna/US094_COMB.seq:*</pre>	
<pre>19: /cgn2_6/ptcodata/1/pna/USO95A_COMB.seq:* 20: /cgn2_6/ptcodata/1/pna/USO95B_COMB.seq:*</pre>	% Query
<pre>21: /cgn2_6/ptodata/1/pna/US095C_COMB.seq:* 22: /cgn2_6/ptodata/1/pna/US095D_COMB.seq:*</pre>	Score
<pre>23: /cgn2_6/ptodata/1/pna/US096A_COMB.seq:* 24: /cgn2_6/ptodata/1/pna/US096B_COMB.seq:*</pre>	1569 100. 1569 100.
<pre>25: /cgn2_b/ptodata/1/pna/US0960COMB.seq:* 26: /cgn2_6/ptodata/1/pna/US0960_COMB.seq:*</pre>	1564.2 99.
<pre>2/: /cgnz_b/ptodata/1/pna/USU99bE_COMB.Seq:* 28: /cgnz_b/ptodata/1/pna/USU97A_COMB.seq:* 20: /cm2 & Artodata/1/pna/USU97A_COMB.seq:*</pre>	1113.4 71.
23: /cgiiz_c/ptodata/1/pia/0203/bcomb.seq:* 30: /cgin2_6/ptodata/1/pia/USO9/C_COMB.seq:* 31: /can2 6/ptodata/1/pna/USO9/R COMB.seq:*	1112.4 70.
11. /cgii/ptodata/1/pia/050/30A	544.8 34.
34: /cgn2_6/ptodata/1/pna/US099A_COMB.seq:* 35: /cgn2_6/ptodata/1/pna/US099B_COMB.seq:*	407.2 26.
36: /cgn2_6/ptodata/1/pna/US099C_COMB.seq:* 37: /cgn2_6/ptodata/1/pna/US099D_COMB.seq:*	405.6 25.
38: /cgn2_6/ptodata/1/pna/US100A_COMB.seq:* 39: /cgn2_6/ptodata/1/pna/US100B_COMB.seq:*	405.6 25.
/cgn2 /cgn2	
` `	405.6 25.

Database :

Page 1	(0, tersh
Gibbs,-T.	3eg. 10 3 w/

																																									have
																																									ţ
: /cgn2_6/ptodata/1/pna/US6000_cOMB.s	: /cgn2_6/ptodata/1/pna/US600	: /cqn2_6/ptodata/1/pna/US6002_COMB.s	: /cgn2_6/ptodata/1/pna/US6003_COMB.se	todata/1/pna/US6004_COMB.s	 /cqn2_6/ptodata/1/pna/US6005_COMB.s 	0: /cgn2_6/ptodata/1/pna/US6006_COMB.s	1: /cgn2_6/ptodata/1/pna/US6007_	2: /cgn2_6/ptodata/1/pna/US6008_	 /cgn2_6/ptodata/1/pna/US6009_ 	4: /cgn2_6/ptodata/1/pna/US6010_C	5: /cgn2_6/ptodata/1/pna/US6011_	6: /cgn2_6/ptodata/1/pna/US6012_C	7: /cgn2_6/ptodata/1/pna/US6013_C	8: /cgn2_6/ptodata/1/pna/US6014_C	9: /cgn2_6/ptodata/1/pna/US6015_C	0: /cgn2_6/ptodata/1/pna/US6016_COMB.s	1: /cgn2_6/ptodata/1/pna/US6017_	2: /cgn2_6/ptodata/1/pna/US6018_C	3: /cgn2_6/ptodata/1/pna/US6019_C	4: /cgn2_6/ptodata/1/pna/US6020_	5: /cgn2_6/ptodata/1/pna/US6021_C	6: /cgn2_6/ptodata/1/pna/US6022_C	7: /cgn2_6/ptodata/1/pna/US6023_COMB.s	8: /cgn2_6/ptodata/1/pna/US6024_COMB.s	9: /cgn2_6/ptodata/1/pna/US6025_COMB.s	0: /cgn2_6/ptodata/1/pna/US6026_COMB.s	 /cgn2_6/ptodata/1/pna/US6027_COMB.s 	2: /cgn2_6/ptodata/1/pna/US6028_COMB.s	 /cgn2_6/ptodata/1/pna/US6029_COMB.se 	4: /cgn2_6/ptodata/1/pna/US6030_COMB.s	gn2_6/ptodata/1/pna/US6031_COMB.s	b: /cgn2_b/ptodata/1/pna/USb032_COMB.se	/: /cgn2_6/ptodata/1/pna/US6033_COMB.s	: /cgn2_6/ptodata/1/pna/US6034_COMB.s	9: /cgn2_b/ptodata/l/pna/US6035_COMB.se	0: /cgn2_6/ptodata/1/pna/US6036_COMB.s	112_5/prodata/1/pna/03003/_r	3: /con2 6/ptodata/1/pna/US6039 COMB.sc	4: /cqn2_6/ptodata/1/pna/US6040_COMB.se	5: /cgn2_6/ptodata/1/pna/US6041_COMB.	o is the number of results predicted by chance
																																									2

umber of results predicted by chance to have a or equal to the score of the result being printed, analysis of the total score distribution.

S	
ω	
н	
ĸ	
₹	
Ξ	
Σ	
5	
S	

Description	Sequence 3, Appli	Sequence 3, Appli	Sequence 4, Appl1	Sequence 4, Appli		Sequence 5649, Ap	Sequence 10, Appl	Sequence 1, Appli	Sequence 10, Appl	Sequence 505, App	Sequence 10898, A	Sequence 388, App	Sequence 388, App	Sequence 2800, Ap	Sequence 109, App	Sequence 109, App	Sequence 6552, Ap	Sequence 1, Appli	Sequence 4846, Ap	Sequence 10353, A	Sequence 9964, Ap
ID	PCT-US02-22746-3	US-09-918-026A-3	US-09-630-892-4	US-09-630-892A-4	US-09-328-857A-2	US-60-360-207-5649	PCT-US02-22746-10	US-09-328-857A-1	US-09-918-026A-10	US-60-229-512-505	US-60-360-207-10898	PCT-US02-18947-388	US-10-172-118-388	US-09-770-173-2800	PCT-US02-21664-109	US-10-191-997-109	US-09-474-436-6552	US-08-657-621A-1	US-09-606-776-4846	US-09-644-873-10353	US-09-652-126-9964
DB	-	34	24	24	17	80	-	17	34	99	80	7	41	30	7	41	18	10	23	25	25
Query Match Length DB	1569	1569	2040	2040	1509	1607	1607	1607	1607	2154	2924	4011	4011	2022	2729	2729	3499	3649	3688	3688	3688
Query	100.0	100.0	99.7	99.7	6.06	71.0	70.9	70.9	70.9	34.7	26.9	26.0	26.0	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
Score	1569	1569	1564.2	1564.2	1425.8	1113.4	1112.4	1112.4	1112.4	544.8	421.4	407.2	407.2	405.6	405.6	405.6	405.6	405.6	405.6	405.6	405.6
Result No.	п	2	m	4	S	9	7	80	0	10	11	12	13	14	15	16	17	18	19	20	21

Qy 241 CCTCTGCCCCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA 300 Db 241 CCTCTGCCCCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA 300 Qy 301 CAGAAAGTTTTCATCATCCGCAAGTCCCTGCTGATGAGCTGATGGAGGTGCACCTTTC 360 Db 301 CAGAAAGTTTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCACCTTTC 360 Qy 361 CAGCACCTCTACCACATCTCATCGCTGCTTGATGAGCTGATGCAGCATTTC 360 Qy 361 CAGCACCTTACATCATCGCTGCTTGATGATCATCATCAGCACCTTGGCATTTC 480 Qy 421 ATCGACTTACATGATGAGGCAGGCTGCTGTGTTTTCATCATCAGCACCTTGGCT 420 Qy 421 ATCGACTTCATTGATGAGGCAGGCTGCTGTGTGTTTTACATCAGCACCTTTCAGCTTC 480 Qy 421 ATCGACTTCATTGATGAGGCCAGGTGCTGTGTGTTTTGATCTACAGCTTC 480 Qy 421 ATCGACTTCATTGATGAGGCCAGGTGCTGTGTGTTTTGATCTTCAGCTTC 480 Qy 481 GGACAGCTCCATTGATGAGCGCAGGTGCTGTGAGTTTGACCTACTTTCAGCTTC 480 Qy 481 GGACAGCTCCATTGAGCGCAGGTGCTGGAGTTTGACCTACTTCACCTTTCAGCTTC 480 Qy 481 GGACAGCTCCATTGGAGCCAGGTGCTGGAGCTGCAGCTACTTCACCTTTCAGCTTC 480 Qy 481 GGACAGCTCCATTGGAGCCAGGTGCTGCTGCTGCAGCTACTCACCTTTCAGCTTCAGCTTCAGCTTCAGCTTCAGCTTCAGCTTCAGCTTCAGCTTTCAGCTTCAGCTTTCAGCTTCAGCTTT	0
Sequence 11001, A Sequence 10023, A Sequence 1097, Ap Sequence 1097, Ap Sequence 1097, Ap Sequence 10987, Ap Sequence 4572, Ap Sequence 4572, Ap Sequence 37, Appli Sequence 37, Appli Sequence 3158, A Sequence 31158, A Sequence 3	CHOLESTEROL ACYLTRANSFERASE-2 Length 1569, Indels 0; Gaps 0; CTGGGAGGGAGGG 60 CTGGGAGGGAGGG 60 CCGGACTTGGTACAA 120 CCGGACTTGGTACAA 120 CCGGACTTGGTACAA 120 CCGGACTTGGTACAA 120 CCGGACTTGGTACAA 120 CCGGACTTGGTACAA 120 CCGGACTAGGTACAA 120 CCGGACTAGGTACAA 120 CCGGACTAGGTACAA 120 CCGGACTAGGTACAA 120 CCGGACTAGGTACAA 120 CCGGACTAGGACAACTG 180 CCGTACACAAGACAAA 240 CCCATCACAAGACAAA 240 CCCATCACAAGACAAA 240
25 US-09-652-93 25 US-09-652-93 25 US-09-652-93 27 US-09-698-03 27 US-09-699-99 28 US-09-726-13 29 US-09-726-13 10 US-09-726-13 10 US-09-737-2 10 US-09-737-2 11 US-09-737-2 12 US-09-737-2 14 US-09-918-918-918-918-918-918-918-918-918-91	ACYL COA ACYL COA DB 1; SS 0; SCACGAGGC SCACGAGGCA IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
22 405.6 25.9 3688 24 405.6 25.9 3688 25 405.6 25.9 3688 26 405.6 25.9 3688 27 405.6 25.9 3688 28 405.6 25.9 3688 29 405.6 25.9 3688 31 405.6 25.9 3688 31 405.6 25.9 4011 32 405.6 25.9 4011 33 405.6 25.9 4011 34 405.6 25.9 4011 35 403.6 25.7 418 36 403.6 25.7 418 37 403.6 25.7 418 38 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418 39 403.6 25.7 418	RESULT 1 PCT-G502-22746-3 Sequence 3, Application PC/TUS0222746 GENERAL INFORMATION: APPLICANT: 1545 Pharmaceuticals, Inc. APPLICANT: Rosanne M. Crooke APPLICANT: Rosanne M. Crooke APPLICANT: Rark J. Graham TITLE OF INVENTION: EXPRESSION TORANISM: HOMO SAPIER: 2001-07-30 TOGANISM: HOMO SAPIER: 2001-07-30 TOGANISM: HOMO SAPIENS FEATURE: NAMBEKR: CDS LOCATION: (1)(1569) FEATURE: NAMBEKR: CDS LOCATION: (1)(1569) EAST LOCAL Similarity 100.0%; SCOFE 1569; PET USO2-22746-3 QUETY MATCH ORDER CONSECREGE CGT CT CGC CT CT CC CT CT CC CT CT CC CT CT CC CT CT

1 ,

OY 421 ATCGACTTCATTGATGAGGCAGGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC 480	421 AICGACTICATIGATGAGGGCAGGCIGCIGCIGCAGTITGACCIACIGATCTICAGCITC 4 481 GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCTGTTGGCG 5 1	541 CGTACCAGGCCTACGGCTGTGGGCCACCTGGACGCACGCA	601 TGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG	Qy 661 GAGCATCAGCTCCCGCCGCCTCCCGTTGTGTCCTGGTCTTCGAGCAGGTTCCTG 720	Oy 721 ATGAAAAGCTACTTCCTGAGAGACTGTGCCTGGGATCCTTCGTGCCAGACGAGGT 780	Oy 781 GAGGGGATCCAGGCCCCAGTTTCTCCAGCTĀCCTCTACTTCTTCTGCCCAACACTC 840	OY 841 ATCTACAGGAGACTTACCCTAGGACGCCCTATGTCAGTGGAATTATGTGGCCAAGAAC 900	0y 901 TTTGCCCAGGCCTGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT 960	Oy 961 CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATC 1020	QY 1021 CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTCATCTTCTTTGCCTTCCTCCTT 1080	OY 1081 TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC 1140	QY 1141 TGGTGGAACTCAACGTCCTTCTCCAACTACCGCACTTGGAACGTGGTGGTCCATGAC 1200	QY 1201 TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGGCTCCTTGGTGCCCGGGCCCGAGGG 1260	Oy 1261 GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATCTTCTGCTTC 1320	Qy 1321 GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTGCTTG	Qy 1381 AACTTCATGATGCATGACCAGCGCCGGCCGGCATGGAAGGTGCTGATGTGGACCATG 1440 .	Qy 1441 CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCGGGGGGGG
Qy 1321 GTCCTGGGGTTCTTCTATCCCGTCATGCTCATACTCTTCCTTGTCATTGGAGGAATGTTG 1380 	OY 1381 AACTTCATGATGCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATG 1440	QY 1441 CTGTTTCTAGGCCAGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGC	1501 CACTGCCCCT	UY 1301 CATACCTAG 1309 DD 1561 CATACCTAG 1569	RESULT 2 US-09-918-026A-3 : Sequence 3, Application US/09918026A		FILE OF INVENIENCE: ISPH-0588 CURRENT APPLICATION NUMBER: US/09/918,026A CURRENT FILING DATE: 2001-07-30	SEQ ID NOS: 03 SEQ ID NOS: 05 SEQ ID NOS: 05 SEQ ID NO 3 SEQ I	CACANLEM: Homo sapiens FEATURE: NAME/KEY: CDS II - COCATION: (1) (1569)	Query Match Query Match 100.0%; Score 1569; DB 34; Length 1569; Best Local Similarity 100.0%; Proceed, No. 0; Matches 1560, Consorusty 100.0%; Proceed, No. 0; Matches 1560, Consorusty 100.0%; Matche	Valive 0; mismarches 0; inders 0; daps GGGCCCGTCTGCGTCTGCAGGGCAGGCTGGAGGGAGCG 60 [61 GAGGCCAACCTGTGGAGATGGAAACACTGAGACGCACAGAGACCCCGGACTTGGTACAA 61 GAGGCCAACCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA 61 GAGGCCCAACTTGTCGAAACAATGAAACAACAACAACAACAACAACAACAACAAAAAAAA	121 TGGACCCGACACATGGGCCTGTGAAGGCACAATTGCTGGAGCAAGGCCAGGGACAACTG 121 TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGGCCAAGGGACAACTG 121 TGGACCCAACAACATGGAGGCTGTGAAGGCACAAAATTGCTGGAGGAGAAGCCAAGGAAACTGAAAAGAAAACTAAAAACTAAAAACAAAAACAAAAAAAA	181 AGGAGCTGCTGCTGCCTGCGGGGGGGGGTATACAATCCTACCCATCACAAGAAAAAAAA	241 CCTCTGCCCCCCCCCCGGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA	Qy 301 CAGAAAGTTTTCATCATCCCCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC 360	361 CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCAGCACCCTGGCC

```
CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACITCATGATGCATGACCAGCGCACCGGCCATGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTCCATGAC
                                                                                                                                                                                                                                                                                                         1192 TGGTGGAACTCAACGTCCTTCTCCAACTACCGCACTTGGAACGTGGTGGTGGTCATGAC
                                                                                                                                                                                                                                                                                                                                         GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC
                                                                                                                                                                    1201 TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGG
                                                                  TITIGCCCAGGCCCTGGGATGTGTGCTCTATGCCTTGATCCTGGGCCGCCTCTGTGTT
ATGAAAAGCTACTCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/09630892A GENERAL INFORMATION:
APPLICANT: Sturley, Stephen L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
US-09-630-892A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1612
                                                                                                                                                                                                                                                                                                   1141
                                                                                                                                                                                                                                                                                                                                                    1252
                                                                                                                                                                                                                                                                                                                                                                     1261
                                                                                                                                                                                                                                                                                                                                                                                     1312
                                                                                                                                                                                                                                                                                                                                                                                                     1321
                                                                                                                                                                                                                                                                                                                                                                                                                      1372
                                                                                                                                                                                                                                                                                                                                                                                                                                       1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1441
                                           712
                                                                             772
                                                                                                                              841
                                                                                                                                              892
          652
                                                            721
                                                                                             781
                                                                                                             832
                                                                                                                                                              901
                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QQ
                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                      QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            òγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       δý
                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                pp
                                                                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .. .. ..
                                                                                                                                              QQ
                                                                                                                                                                              q
                                                                                                                                                                                                δy
                                                                                                                                                                                                                g
                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                  òγ
                                                                                                             QQ
                                                                                                                              δŏ
                                                                                                                                                               ă
          g
                          Óγ
                                         g
                                                            Qγ
                                                                          q
                                                                                              δ
                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       099
           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      651
                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  471
                                                                                                                                                                                                                                                                                                            GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA 120
                                                                                                                                                                                                                                                                                                                    TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                                                                                                                                                                                                              231
                                                                                                                                                                                                                                                                                                                                                                                              291
                                                                                                                                                                                                                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGACAGCTGCCATTGGCGCTGGTGCACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                CCTCTGCCCCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACAGCIGCCATIGGCGCIGGIGACCIGGGIGCCCATGITICIGICCACCCIGITGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGCGACGGGCCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGTACCAGGCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGGCGACGGGCTGGGC
                                                                                                                                DIACYLGLYCEROL
                                                                                                                                                                                                                                                                           1 ATGGAGCCAGGCGGGCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG
                                                                                                                                                                                                                                                                                                                                                      AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                                                                                                                                                                                       301 CAGAAAGITITCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGC
                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                            Indels
                                                                                                                               ENCODING
                                                                                                                                                                                                                                           Score 1564.2; DB 24;
Pred. No. 0;
                                                                                                                                                                                                                                                            3;
                                                                                                                                A GENE
                                                                                                                                                                                                                                                            Mismatches
                                                                                                             APPLICANT: Sturley, Stephen L.
APPLICANT: Oelkers, Peter
TITLE OF INVENTION: ISOLATION OF A GENE
TITLE OF INVENTION: ACYLTRANSFERSE
FILE REFERENCE: 0575/56331-A
CURRENT APPLICATION NUMBER: US/09/630,892
CURRENT FILING DATE: 2000-08-02
NUMBER OF SEQ ID NOS: 32
SOFTWARE: Patentin Ver: 2.0
                                                                                                Sequence 4, Application US/09630892
GENERAL INFORMATION:
                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                            99.78;
                                                                                                                                                                                                                                             Query Match
Best Local Similarity 99.8
Matches 1566; Conservative
                                                       1569
                                       CATACCTAG 1569
                                                                                                                                                                                                ; LENGTH: 2040
; TYPE: DNA
; ORGANISM: Yeast
US-09-630-892-4
                                               CATACCTAG
                                                                                 RESULT 3
US-09-630-892-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                               52
                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                112
                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                   241
                       1501
                                       1561
                                                       1561
      1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                αq
                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                   oγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Óγ
                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                δy
                       g
                                                       QQ
                                        ò
        ò
```

1080

1131

1011
1020
1071

960

951

891

1140

1191

1200

1251

1260 1311 1320 1371 1431

1500

1551

1140

1251

1311

1011

960

900 951 1011

```
CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATC 1020
                                                                                                                                                   CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTCATCTTCTTTGCCTTCCTCCAT 1080
                                                                                                                                                                                                           TGGTGGAACTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGAC 1200
                                                                                                                                                                                                                                                                                    TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGG 1260
                                                                                                                                                                                                                                                                                                                             1492 CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                      AACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                         1432 AACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGC
                                                                           ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                 TTTGCCCAGGCCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Farese, Robert
APPLICANT: Novak, Sabine
APPLICANT: Novak, Sabine
APPLICANT: Erickson, Sandra
TITLE OF INVENTION: Novel Acyl CCA:Cholesterol Acyl
TITLE OF INVENTION: Transferase (ACAT-2)
FILE REFERENCE: 6510-1044US1
CURRENT APPLICATION UNMBER: 1999-06-08
PRIOR FILING DATE: 1999-06-08
PRIOR FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2, Application US/09328857A GENERAL INFORMATION:
"APPLICANT: Cases, Sylvaine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1561 CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1612 CATACCTAG 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
US-09-328-857A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO
                                                                                                                                                                                                                     1132
                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                           961
                                                                                                                                1012
                                                                                                                                                                         1072
                                                                                                                                                                                                                                          1141
                                                                                                                                                                                                                                                               1192
                                                                                                                                                                                                                                                                                    1201
                                                                                                                                                                                                                                                                                                         1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1501
                      841
                                           892
                                                                                      952
                                                                                                                                                      1021
                                                                                                                                                                                               1081
                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                      ŏ
                                          g
                                                                ò
                                                                                   g
                                                                                                          οy
                                                                                                                               qq
                                                                                                                                                      δ
                                                                                                                                                                      q
                                                                                                                                                                                              ٥y
                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                       Óγ
                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                     ó;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                   231
                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                             291
                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                         351
                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                   411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCATCAGCTCCCGCCGGCCTCCCGTTGTGTCTCTTGGAGCAGCAGGTTAGGTTCCTG 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGGGGATCCAGGCCCCCAGTTTCTCCCAGCTACCTCTACTTCCTCTTCTGCCCAACACTC 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          891
                                                                                                                                                                                                                              111
                                                                                                                                                                                                                                                                                              TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                         9
                                                                                                                                                                                                                     ATGAAAAGCTACTCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ATGGAGCCAGGCGGGGCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG
                                                                                                                                                                                                                                                                                                                                         AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                                                                                                                                                                                   CCTCTGCCCCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                               CAGAAAGTTTTCATCCACCAAGTCCCTGCTTGATGAGCTGGAGGTGCAGCATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCATCACCACCCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCGACGCGACGGCCTGGGC
FILE REPERENCE: 0575/56313-A

CURRENT APPLICATION OF A GENE ENCODING DIACYLGLYCEROL
CURRENT APPLICATION NUMBER: US/09/630,892A

CURRENT FILING DATE: 2000-08-02

NUMBER OF SEQ ID NOS: 32

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 4

LENGTH: 2040

TYPE: DNA
ORGANICATIONA

LENGTH: 2040
                                                                                                                                                               Length 2040;
                                                                                                                                                                                     0;
                                                                                                                                                                                     Indels
                                                                                                                                                               DB 24;
                                                                                                                                                                                     <u>ښ</u>
                                                                                                                                                              Score 1564.2;
Pred. No. 0;
                                                                                                                                                                                     0; Mismatches
                                                                                                                                                              99.7%;
Similarity 99.8%;
6; Conservative
                                                                                                                               OKGANISM: yeast
                                                                                                                                                                          Best Local Simi
Matches 1566;
                                                                                                                                          US-09-630-892A-4
                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                        112
                                                                                                                                                                                                                                                                                                                  172
                                                                                                                                                                                                                                                                                                                                                             232
                                                                                                                                                                                                                                                                                                                                                                                                         292
                                                                                                                                                                                                                                                                                                                                                                                                                                                  352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         832
                                                                                                                                                                                                                              22
                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                            음
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
```

1380 1431 1440 1500

1551

1491

1560

ဖ

```
781 AICIACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71.0%;
83.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               1561 CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 1296; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                         CATACCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
US-60-360-207-5649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-60-360-207-5649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                  1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                               1021
                                                                                                                                                                1141
                                                                                                                                                                                                                                                                                                                                            1441
                                      841
                                                                        106
                                                                                                            961
                                                                                                                             1081
                                                                                                                                                                                 1081
                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                     1261
                                                                                          1021
                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                        Op
                                                                                                                                                                                                                                                                                                                                                                             òγ
                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                             .
D
                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                   QQ
                                                                                                                                                                                                                                                                      ^{\circ}
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                           g
                                                                                                                                              셤
                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                     Q
                    QΥ
                                     g
                                                                        g
                                                                                                                             δλ
                                                                                                                                                                ò
                                                                                                                     ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                    ATCGACTICATIGATGAGGGCAGGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                            009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                CCTCTGCCCCCACCTCCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA 300
                                                                                                                                                                                                                                                                                                                 CAGAAAGITITCAICCAICCGCAAGICCCIGCTIGAIGAGCIGAIGGAGGIGCAGCAITIC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                           TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                         GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA 120
                                                                                                                                                                                   09
                                                                                                                                       9
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781 GAGGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTTTCTCTTCTTCTGCCCAACACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                 GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGGCGACGGGGCCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCATCAGCTCCCCCCCCCCTCCCGTTGTCTCCTCGTCTTCGAGCAGCTTAGGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAAAAGCTACTCCTTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                                                                                                                                                                               AGGGAGCTGCTCGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                                                                                                                             ATGGAGCCAGGCGCGCCCGTCTGCGTCTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGG
                                                                                                    Length 1509,
                                                                                                                     (09
                                                                                                    DB 17;
                                                                                                     Score 1425.8; DB 1
Pred. No. 1.6e-307;
0; Mismatches 9;
                                                                             or
                                                                                                                       .
0
                                                                             ပ
                                                                                                     90.9%;
nilarity 95.6%;
Conservative 0
                                                                             ģ
                                                   ģ
                                                   à
                                                                             à
      TYPE: DNA

CRGANISM: human

FEATURE:

NAME/KEY: misc_feature

CAPTION: (571)...(571)

OTHER INFORMATION: N is a,

NAME/KEY: misc_feature

CAPTION: (573)...(573)

US-09-328-857A-2.
                                                                                                               Similarity
                                                                                                                Best Local Sim
Matches 1500;
                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                · 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                      276
                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                          -4
                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                             61
                                                                                                                                                                                            61
                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                            Dp
                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                           q
                                                                                                                                                                             δ
                                                                                                                                                                                            qq
                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                 ò
```

1320 1380 1320 1080 1200 1260 1260 Gaps CTGCAGAGACAGAGGCTGGGAGGGGGAGCGGGGGCCCACCTGT----GGAGATGGA 84 1261 GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTTGGAGGAATGTTG CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATC TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCCGGGCCCCGAGGG 1141 TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGG GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTC 1321 GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCAT TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC SYSTEM AND USES THEREOF 15; Length Score 1113.4; DB 80; Lengt Pred. No. 8.2e-238; 0; Mismatches 246; Indels APPLICANT: VENTER, J. Craig TITLE OF INVENTION: HUMAN GENOME DISCOVERY FILE REFERENCE: CL001321 CURRENT APPLICATION NUMBER: US/60/360,207 CURRENT FILING DATE: 2002-03-01 NUMBER OF SEQ ID NOS: 47235 SEQ ID NO 5649 ; Sequence 5649, Application US/60360207; GENERAL INFORMATION:

ä

_																		
															0	0 2	0 0	8 6
110	144	204	264	324	384	444	504	564 590	612 650	672 710	732	792 830	852	912 950	972	1032	1093	1153
CTTCGGAGGAGAGAGGGCTGGGAGGAGGAGGAGGAAGGGAGCCCGTGGAGAAAGGG	AACACTGAGACGCACGAGCCCCGGACTTGGTACAATGGACCCGACACACTGGAGGCTGTG	AAGGCACAATTGCTGGAGCAAGGGCACAACTGAGGGAGCTGCTGGATCGGGCCATG	CGGGAGCTATACAATCCTACCCATCACAAACACTCTGCCCCCACCTCCCCCAGGT	TCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCAŤCATCGGCAAG	TCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTCCGCACCATCTACCACATGTTCATC	GCTGGCCTGTGTGTCTTCATCACCACCCTGGCCATCGACTTCATTGATGAGGGCAGG	CTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTG	ACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGG	GCCAGGGGCACCTGGACGCAGGCGACGGCCTGGGCTGTGCGCTTTTA	GCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTGCAGTGGAGCATCAGCTC	CCGCCGGCCTCCCGTTGTCTCCTGGTCTTCGAGCAGGTTAGGTTCCTGATGAAAAGCTAC	TCCTTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAG	GCCCCCAGTTTCTCCAGCTACCTCTACTTCTGCCCAACACTCATCTACAGGGGGGGG	ACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCC	CTGGGATGTGTGCTGATGCCTGCTTCATCCTGGCCGCCTCTGTGTTCCTGTCTTTGCC	AACATGAGCCGAGAGCCCTTCAGCACCCGGGCCCTGGTGCTCTCTATCCTGCATGCCACG	TTGCCAGGCATCTTCATGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAAC	GCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCA 1152
51	95	145	-2 05	265 7291	325 351	385	445	505	565 591	613	673	733	793	853 891	913	97.3	1033	1093
g	Oy Dp	o P	Q Q	Oy Op	Oy Dp	Qy Dp	oy op	ç d	oy Op	o,	oy op	ç a	oy Og	9 9	Oý Dp	Qy Dp	6 6	Oy Dp

```
RESULT 7
PCT-USG2-22746-10
Sequence 10, Application PC/TUSG222746
Sequence 10, Application PC/TUSG222746
Sequence 10, Application Sequence 10, Application Sequence 10, Application Sequence 10, Applicant Sequence 10, Applicant Sequence 10, Applicant Mark J. Graham M. Lemonidis
APPLICANT Kristina M. Lemonidis
TITLE OF INVENTION: EXPRESSION
TITLE OF INVENTION: EXPRESSION
TITLE OF INVENTION: EXPRESSION
FILE REFERENCE: ISPH-0694
CURRENT FILING DATE: 2002-07-15
PRIOR PILING DATE: 2001-07-30
NUMBER OF SEQ ID NOS: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;;
                   1393 CATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC 1452
                                                                                                                                                                                                                                                                                                                                      1453 CAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCCCTTG 1512
ACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGC 1212
                                                                                                                                  1273 GGTGTGTTCCTGGTCTCCGCAGTGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTC 1332
                                                                                                                                                                                                   1333 TTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATG 1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATG 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28 CTGCAGAGGACAGAAGGGCTGGGAGGGGGAGCGGGAGCGCCAACCCTGT---GGAGATGGA 84
                                                                                                                                                                                                                                                                                                                                                                                                         1513 CCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                         1551 CCCCAGACAACATCTGGGGGATGGTGACACCCCGCTTTGGTCCTGCCATCCCTAG 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70.9%; Score 1112.4; DB 1; Length 1607; 83.2%; Pred. No. 1.4e-237; Live 0; Mismatches 247; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: a, c, g or t
PCT-US02-22746-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 1295; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
NAME/KEY: CDS
LOCATION: (30)...(1607)
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: unsure
LOCATION: (176)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 10
1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145
                             qq
                                                                                           g
                                                                                                                                                              g
                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                               ŏ
                                                                                                                              Ω
```

```
1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTG 1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1130
                                                                                                                                                                                                                                                                                                                                                                                                                                               1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1092
                                                                                                                                                                                                                                                                                                                                                                                                        AACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTTTCCTGCATGCCACG 1032
                                                                                                                                                                                                                                                                                                      792
                                                                                                                                                                                                                                                                                                                                    852
                                                                                                                                                                                                                                                                                                                                                                          CIGGGATGIGIGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCC 972
                                                                                                                                                                                                                  672
                                                                                                                                                                                                                                                732
                                                                                                                           470
                                                                                                                                                                                                        612
                                                                                                                                                          530
                264
                             290
                                                324
                                                               350
                                                                              384
                                                                                                            444
                                                                                                                                           504
                                                                                                                                                                          564
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1033 TIGCCAGGCATCTICATGCTGCTGCTCTTTTTTTTTTTCTTTCCTTCCATTGCTGGCTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACGTCCTTCTCCAACTACTACGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1011 AACATGAGCCGGGAACCCTTCAGCACCGGGCTCTGCTGCTCTCCATCTTGCATGCCCG
                                                                                                                                                                                                                                                                              TCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAG
                                                                                                                                                                                                                                                                                                                                   GCCCCCAGTITCTCCAGCTACCTCTTCCTCTTCTGCCCAACACTCATCTACAGGGAG
                                                                                                                                                                                                                                                                                                                                             GCCGCCCACGCCGTGCTCTGCGCCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTC
                                                                                                                                                                                                                                                                                                              ACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCC
                                                                                                                                          GCCA-------GGGGCACCTGGACGCACGGGGCCTGGGCTGTGCGCTTTTA
                                                                                                                                                                                                                                                                       ACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGG
                                                                                                                                                                                 TCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCATCATCGCAAG
                                                         TCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTCCGCACCATCTACCACATGTTCATC
                                                                                      GCTGGCCTGTGTGTCTTCATCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGG
                                                                                                                      AAGACNCAGTITCTGGAGCAAGCACAGAGAGATTGGCAGAGCTGTTGGATCGGGCCCTA
                 CGGGAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCACCTCCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1251
                                                                                                                                                                                                                                                                                                                                                                                                    913
                                                                                                                                                                                                                                                                                                                       771
                                                                                                                                                                                                                                                                                                                                                                      853
                                                                                                                                                                                                                                                                                                                                                                                     891
                                                                                                                                                                                                                                                                          673
                                                                                                                                                                                                                                                                                          711
                                                                                                                                                                                                                                                                                                        733
                                                                                                                                                                                                                                                                                                                                       793
                                                                                                                                                                                            531
                                                                                                                                                                                                                            591
                                                                                                                                                                                                                                                           651
                                                                 291
                                                                                                351
                                                                                                                385
                                                                                                                              411
                                                                                                                                              445
                                                                                                                                                             471
                                                                                                                                                                            505
                                                                                                                                                                                                            265
                                                                                                                                                                                                                                           613
    171
                    202
                                                  265
                                                                                 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                          δy
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                         δλ
                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                            g
                                                                                                                                                                                          g
                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                            ò
                                                                                                                              g
                                                                                                                                                                            óγ
                                                                                               g
                                                                                                                ò
                                                                                                                                              ò
                     à
                                  g
                                                  ŏ
                                                               g
                                                                                 ò
```

```
290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324
                                                                                                                       CAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCTTA 1512
                                                                                                                                                                          204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84
                                                                                                                                                                                                               CCCCAGGCAACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG 1569
                                                                                                                                                                                                                             1551 CCCCAGACACATTCTGGGGGATGGTGACACCCCAATCTTGGTCCTGCCATACCTAG 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTTGAGGAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCATCATCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     145 AAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGGGAGCGCCAACCCTGT---GGAGATGGA
GGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTC
                 TTCTATCCCGTCATGCTGATACTCTTCCTTGTCGAGGAATGTTGAACTTCATGATG
                                                                    1393 CATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1112.4; DB 17; Lengt
Pred. No. 1.4e-237;
0; Mismatches 247; Indels
                                                                                                                                                                                                                                                                                                                        APPLICANT: Cases, Sylvaine
APPLICANT: Farese, Robert
APPLICANT: Farese, Robert
APPLICANT: Brickson, Sabine
TITLE OF INVENTION: Transferase (ACAT-2)
TITLE OF INVENTION: Transferase (ACAT-2)
TITLE REFERENCE: 6510-1044US1
CURRENT APPLICATION NUMBER: US/09/328,857A
CURRENT FILING DATE: 1999-06-08
PRIOR FILING DATE: 1999-06-33
NUMBER OF SEQ ID NOS: 8
SOFTWARE: FASTERO FOR Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , NAME/KEY: misc_feature
; LOCATION: (176)...(176)
; OTHER INFORMATION: N means a, g, C or
US-09-328-857A-1
                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/09328857A GENERAL INFORMATION:
APPLICANT: Cases, Sylvaine .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match 70.9%;
Best Local Similarity 83.2%;
Matches 1295; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: mouse
                                                                                                                                                                                                                                                                                      RESULT 8
US-09-328-857A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 1
LENGTH: 1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                                                                      1513
                                                                                                                                                                   1453
       1273
                               1311
                                                           1333
                                                                                                                                         1431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                            qq
                                                           Ωÿ
                                                                                   g
                                                                                                              δ
                                                                                                                                      QQ
                                                                                                                                                                 Óγ
                                                                                                                                                                                          Dp
                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                             QQ
```

σ

```
ACYL COA CHOLESTEROL ACYLTRANSFERASE-2
CAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCGCACTGCCCCTTA 1512
                                           1491 CAGGGCATCCAGGTATACTGCCAGGAGTGGTATGCTCGTCGACACTGTCCCCTG 1550
                                                                             CCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                           85 AACACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACACATGGAGGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145 AAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               205 CGGGAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCCCCCACCTCCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAGTTTTCATCATCGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCCTGCTTGATGAGCTGAGGTGCAGCATTTCCGCACCATCTACCACATGTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACACCTGCCATTGGCGCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 471 TTGATGCTGGAGTTTGACTTACTCCTCTTCAGCTTCGGACAGCTGCCCTTGGCGCTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        505 ACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                28 CTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGGGAGCGCCAACCCTGT---GGAGATGGA
                                                                                                                                                                                                                                                                                                                                                                                                    34; Length 1607
                                                                                       4e-237;
                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                      APPLICANT: Rosanne M. Crooke
APPLICANT: Mark J. Graham
APPLICANT: Mark J. Graham
APPLICANT: Mark J. Graham
TITLE OF INVENTION: ANTISENSE MODULATION OF ACT
FILE REFERENCE: ISPH-0588
CURRENT APPLICATION NUMBER: US/09/918,026A
CURRENT FILING DATE: 2001-07-30
NUMBER OF SEQ ID NOS: 65
SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                    Score 1112.4;
Pred. No. 1.46
                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                RESULT 9
8-09-918-026A-10
Sequence 10, Application US/09918026A
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                      or
                                                                                                                                                                                                                                                                                                                                                                                                   70.9%;
ilarity 83.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                      o,
                                                                                                                                                                                                                                                                                                                                   LOCATION: (30)...(1607)
NAME/KEY: unsure
                                                                                                                                                                                                                                                                                                   musculus
                                                                                                                                                                                                                                                                                                                                                        ; LOCATION: (176)
; OTHER INFORMATION: a,
US-09-918-026A-10
                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 1295; Conser
                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Mus
                                                                                                                                                                                                                                                                                                                          NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                              LENGIH:
                                                                                                                                                                                                                                                                                                              FEATURE
                                                                            1513
                                                                                                 1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          351
                                 1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                 δ
                                                     qq
                                                                            ò
                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACGTCCTTCTCCAACTACTACGGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGC 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTG 1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTATCCCGTCATGCTGATACTCTTGTCATTGGAGGAATGTTGAACTTCATGATG 1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1393 CATGACCAGCGCACCGGCCAGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC 1452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TIGCCAGGCATCTICATGCTGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAAC 1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCA 1152
                                             444
                                                                 470
                                                                                      504
                                                                                                                                 564
                                                                                                                                                      590
                                                                                                                                                                            612
                                                                                                                                                                                                 650
                                                                                                                                                                                                                      672
                                                                                                                                                                                                                                                                 732
                                                                                                                                                                                                                                                                                       770
                                                                                                                                                                                                                                                                                                                                   830
                                                                                                                                                                                                                                                                                                                                                         852
                                                                                                                                                                                                                                                                                                                                                                             890
                                                                                                                                                                                                                                                                                                                                                                                                   912
                                                                                                                                                                                                                                                                                                                                                                                                                         950
                                                                                                                                                                                                                                                                                                             TCCTTCCTGAGAGAGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAG 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCAGCCGCGCGCGCGTGGGGTGCTGGGGGCCAGCCTGGGCTGCGTTCTGCTG
                                                                                                                                                                                                                                 GGGCCAGGCATCTTCATGCTGCTCCTCATCTTCTTCGCCTTCCTGCACTGCTGCTCAAC
 TCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTCCGCACCATCTACCACATGTTCATC
                                                       CTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTG
                                                                                                                                 ACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGG
                                                                                                                                                                            GCCA-------GGGGCACCTGGACGCAGGCGACGGGCCTGGGCTGTGCGCTTTTA
                                                                                                                                                                                                                      GCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTC
                                                                                                                                                                                                                                                                 CCCCCCCCCCTCCCCTTGTCTCCTGCTCTTCCAGCTTAGGTTCCTGATGAAAAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                    ACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTTTTCCTGCATGCCACG
                                             GCTGGCCTGTGTGTCTTCATCATCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1333
                     351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1191
                                           385
                                                                 411
                                                                                      445
                                                                                                                                                                           565
                                                                                                                                                                                                 591
                                                                                                                                                                                                                                                                                       711
                                                                                                                                                                                                                                                                                                             733
                                                                                                                                                                                                                                                                                                                                                         793
                                                                                                                                                                                                                                                                                                                                                                                                   853
                                                                                                                                                                                                                                                                                                                                                                                                                         891
                                                                                                                                                                                                                                                                                                                                                                                                                                               913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        973
                                                                                                                                 505
                                                                                                                                                                                                                     613
                                                                                                                                                                                                                                           651
                                                                                                                                                                                                                                                                 673
                                                                                                                                                                                                                                                                                                                                  771
 325
                                                                                                                                                                                                                                                                                                                                                                             831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                  g
                                                            g
                                                                               ò
                                                                                                        q
                                                                                                                                9
9
                                                                                                                                                                      9
9
9
9
                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        å
                                           ò
```

5

84

350

204

264 290 324 410 444

384

504 530

```
1021
                                                                                                                                                                                                                                                                                                                                                                                                          1141
                                                                                                                                                                                                                                                                                                                                                                                                                       849
                                                                                                                                                                                                                                                                                                                                                                                                                                   1201
                                                                                                                                                                                                                                                                                                                   609
                                                                                                                                                                                                                                                                                                                                             699
                                                                                                                                                                                                                                                                                                                                                                      729
                                                                                                                                                                                                                                                                                                                                                                                               789
                                                                                                                                                                                                                                                                                                                                                                                                                                                 606
                                                                                                                                       189
                                                                                                                                                                            601
                                                                                                                                                                                                                369
                                                                                                                                                                                                                                         429
                                                                                                                                                               249
                                                                                                                                                                                       309
                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                 pp
                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                             δy
                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                          δy
                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                           QQ
                                                                                                                                                                                                    q
                                                                                                                                                                                                                φ
                                                                                                                                        Ω
                                                                                                                                                  셤
                                                                                                                                                                ò
                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                             1452
                                                                                                                                                                                                                                                                                                                                                          1453 CAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCGCACTGCCCCTA 1512
                                                                                                                                                                                                                                                                                                                                                                                                            GGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTC 1332
                                                                                                                                                                                                                                                                                                                                 1333 TICTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATG 1392
                                                                                                                                                                                                           1070
                                                                                                                                                                                                                                   1130
                                                                                                                                                                                                                                                                         1212
                                                                                                                                                                                                                                                                                                  TACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTG 1272
                                                                                                                                                                            972
                                                                                                         830
                                                                                                                                  890
                                                                                                                                              912
      590
                  612
                                           672
                                                       710
                                                                    732
                                                                                770
                                                                                            792
                                                                                                                     852
                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC
                                                                                                                                                                                                                                                                                                                                                                                     AACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTTTCTGCTATGCCACG
                                                                                                                                                                                                                                                                         ACGICCITCICCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGC
                                                                                                                                                                      CTGGGATGTGTGCTCTATGCCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCC
                         TCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAG
                                                                                                   GCCCCCAGITICICCAGCIACCICIACTICCICTICIGCCCAACACICAICIACAGGGAG
                                                                                                                             ACCTGGGTTCCCATGTTCCTGTATACGCTCCTAGTGCCCTACCAGACCCTGTGGGTTGTG
                  GCCA-------GGGGCACCTGGACGCAGGCGACGGGCCTGGGCTGTGCGCTTTTA
                                           GCCGCCCACGCCGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTC
                                                                                                                                                                                                                                                                                                                                                                             1393
                                                                                                                                                                                                                                                                                                                                                                                                                                 1513
                                                                                                                                                                                                                                                                                                                                                                                                                                             1551
                                                                                                                                                                                                                                                                                                                                          1311
                                                                                                                                                                                                                                                                                                                1251
                                                                                                                                                                                                                                                                                                                              1273
                                                                                                                                                                                                             1011
                                                                                                                                                                                                                                                 1093
                                                                                                                                                                                                                                                                           1153
                                                                                                                                                                                                                                                                                       1191
                                                                                                                                                                                                                                                                                                    1213
                                                                                                                                                                                                                          1033
                                                                                                                                                                                                                                      1071
                                                                                                                                                                                                                                                               1131
                                                                                  711
                                                                                                                                    831
                                                                                                                                                853
                                                                                                                                                                         913
                                                                                                                                                                                     951
                                                                                                                                                                                                  973
                                             613
                                                         651
                                                                      673
                                                                                               733
                                                                                                           771
                                                                                                                        793
                                                                                                                                                            891
         531
                    565
                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                        δy
                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                             g
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                      ď.
                                                                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                          g
                                                                                                                                                                                     П
                                                                                                                                                                                                  οy
                                                                                                                                                                                                                          ò
                                                                                                                                    g
                                                                                                                                                ŏ
                                                                                                                                                                         ò
                                                                                  g
                                                                                                          qq
                                                                                                                        ò
         g
                      ò
                                d
                                             ò
                                                         g
                                                                     ŏ
                                                                                              ò
```

```
NUCLEIC ACID MOLECULES ENCODING
SE II PROTEINS, AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATCTTGCCCGGTTGTGAACTCAGTCCTCTTGGCTGACTGTGCCCAACACTCATCTACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCCCTGGGATGTGTGCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          961 GCTAGCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGCGGCGTGGAGCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCCCGCCGGCCTCCCGGTTGTGTCCTGGTCTTCGAGCAGGTTAGGTTCCTGATGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTACTCCTTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1081 ACGGACAGGAAGGAACCAGCIGGIGGGCCGATCCTTCGIGCCAGACGAGGIGAGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAGGCCCCCAGTTTCTCCAGCTACCTCTTCTTCTTCTGCCCAACACTCTTCTACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTCATCATCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTCCGCACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAACCTCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAGCAAGGATCATGAGCCCTGCTTGAGTAAGTCGGGGTGATGACAAGTAATGGGAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                   CCCACCTCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAĠT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTACCACATGTTCATCGCTGGCCTGTGTCTTCATCATCAGCACCCTGGCCATCGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCT
                                                                                                PHASE II PROTEINS, AND
                                                                                                                                                                                                                                                                                                                     Length 2154;
                                                                                                                                                                                                                                                                                                                                                            Indels
US-00-125-125-125.
Sequence 505, Application US/60229512
GENERAL INFORMATION:
APPLICANT: Beasley, Ellen
TITLE OF INVENTION: ISOLATED HUMAN PHASE II
TITLE OF INVENTION: HUMAN DRUG-METABOLIZING PROTEINS, NUC
TITLE OF INVENTION: HUMAN DRUG-METABOLIZING PHASE II
FILE REPERENCE: CL000770
CURRENT APPLICATION NUMBER: US/60/229,512
CURRENT FILING DATE: 2000-09-05
NUMBER OF SEQ ID NOS: 516
SOFTWARE: FASTSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                         99
                                                                                                                                                                                                                                                                                                                       Score 544.8; DB 66;
Pred. No. 6.3e-111;
0; Mismatches 357;
                                                                                                                                                                                                                                                                                                                           34.7%;
65.8%;
                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 65.8
Matches 878; Conservative
                                                                                                                                                                                                                                                  ; TYPE: DNA
; ORGANISM: HUMAN
US-60-229-512-505
                                                                                                                                                                                                                SEQ ID NO 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
```

```
TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                            573
                                                                                                                                                                                                                                  803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1308
                                                        588
                                                                                                                                                       689
                                                                                                                                                                                                                                                                                                            923
 467
                                      527
                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
  à
                  g
                                      ò
                                                      qq
                                                                            ò
                                                                                             g
                                                                                                                 ò
                                                                                                                                Pp
                                                                                                                                                      ò
                                                                                                                                                                       qq
                                                                                                                                                                                            δý
                                                                                                                                                                                                            g
                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2;
                                                                                                                                                                                                                                                     1641
                                                                                                                                                                                                                                  GTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCAT 1388
                                                                                                                                                                                                                                                                                                         AGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCACTGCCC 1508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTTTGCCTTCCTCCATTGCTGGCT
                                                        CACGTTGCCAGGTGAGCCAACTAAGGTAGGCTAGAGCAGCTGTGCCCTGGGGAAGGCTA
                                                                           CAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAA
                                                                                                                                                                                                       ------GGAGGGTTAGGCTCCCCAGTGGCCCATGAGTATATCTTCTGCTCGGG
                                                                                                                                                                                                                                            TGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGC
                                                                                              1441 AAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGTGGGG-----
                                                                                                                 CTCAACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTA
                                                                                                                                                                                             GCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGG
                                                                                                                                                                                                                                                                        GATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCT
                                                                                                                                                      CAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                               THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                               SYSTEM AND USES
                                                                                                                          Score 421.4; DB 80;
Pred. No. 2.3e-83;
0; Mismatches 506;
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
US-60-360-207-10898
Sequence 10898, Application US/60360207
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig
TITLE OF INVENTION: HUANN GENOME DISCOVERY SYS
FILLE REFERENCE: CL001321
CURRENT APPLICATION NUMBER: US/60/360,207
CURRENT FILING DATE: 2002-03-01
NUMBER OF SEQ ID NOS: 47235
SEQ ID NO 10898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26.9%;
59.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        769; Conservative
                                                                                                                                                                                                                                                                                                                                                          CTTACCCCAGGTAA 1775
                                                                                                                                                                                                                                                                                                                                               CTTACCCCAGGCAA 1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: HUMAN
US-60-360-207-10898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Si
Matches 769;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                  1321
                                                       1381
                                                                           1089
                                                                                                                1149
                                                                                                                                  1496
                                                                                                                                                                                            1269
                                                                                                                                                                                                                                                                       1389
                                                                                                                                                                                                                                                                                         1642
                                                                                                                                                                                                                                                                                                            1449
                                                                                                                                                                                                                                                                                                                             1702
                                                                                                                                                                                                                                                                                                                                                                  1762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                347
                                     1029
                                                                                                                                                                         1529
                                                                                                                                                                                                               1529
                                                                                                                                                                                                                                  1329
                                                                                                                                                                                                                                                    1582
                                                                                                                                                                                                                                                                                                                                                1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         468
 696
                                                                                                                                                      1209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     407
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                  g
                                                                                                                             g
                                                                                                                                                                    Q
                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
ò
                                     ò
                                                   g
                                                                         ò
                                                                                          g
                                                                                                              õ
                                                                                                                                                     ò
                                                                                                                                                                                       ò
                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

1402 1462 1067 1042 1127 1102 1187 1162 1307 1282 1367 1342 1427 1487 1007 1163 CCAACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATC 1222 1488 GGAAAAGGCCAATCTGGAACATCATGGTTTGGGCTTCTCTGTGTCCTGGGCTATGGACTCA 1547 922 982 572 628 688 748 802 887 862 947 647 707 767 GCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCC ----CACCTGGACGCAGGCGACGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGG 648 CTTACCCATTGATCTATTCCCTTGTCCATGCTTGCTCTTTAGTCTTTCAACTTGGAG CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTT 828 ATATCCCACGAGTACTAAATGCAGCCAAGGAGAAATCAAGCAAAGATCCACTACCCACAG TCTCCAGCTACCTCTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCTA 863 GGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTG TGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCC GAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATCCTGCATGCCACGTTGCCAGGCA 1043 TCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCG 1103 AGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTCT 1223 AGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTCC TGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCG TCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGATGACCAGC 1463 AGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCCAGGCAA 528 TGGCCTATGCTTTTGGCAAATTTCCTACTGTTATTTGGACATGGTGGGCCATGTTCCTGT TGCTCTGCGCGCTGCCGGTCCACGTGGCGGCATCAGCTCCCGCCGGCCTCCCGTT CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGG-

```
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: L21934
DATABASE ENTRY DATE: 2001-06-18
US-10-172-118-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                          1162
                                                                                                                                                                                                          1102
          922
                                                                          982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏλ
                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                          δŏ
                                         g
                                                                          ŏ
                                                                                                            qq
                                                                                                                                         á
                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGAATCCCACTGTAAGATGGGGTTATGTCGCTATGAAGTTTGCACAGGTCTTTGGTTGC 2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2157 TCATCATTATATTCGAGCAGATTCGTTTGTAATGAAGGCCCACTCATTTGTCAGAGAG 2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1737 CACCTCCAGAACAAGGAAAGATTTTTATTGCAAGGCGCTCTCTTTAGATGAACTGCTTG 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287 CATCCCTGGGGAAACAGAAAGTTTTCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGTGCAGCATTICCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTTCATCA 406
                                                                                                   Sequence 388, Application PC/TUS0218947
Sequence 388, Application PC/TUS0218947
Sequence 388, Applications
APPLICANT: Rosetta Inpharmatics
TITLE OF INVENTION: Diagnosis and Prognosis of Breast Cancer Patients
TITLE OF INVENTION: Diagnosis and Prognosis of Breast Cancer Patients
TITLE OF INVENTION: Diagnosis and Prognosis of Breast Cancer Patients
CURRENT APPLICATION NUMBER: PCT/US02/18947
CURRENT FILING DATE: 2002-06-14
NUMBER OF SEQ ID NOS: 2699
SEQ ID NO 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .977 cracatricacratricretricaacarregeccacreecraracaagagtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             689 GIGICCIGGICITCGAGCAGGITAGGITCCIGAIGAAAAGCIACICCITCCIGAGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            647 TCC------ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               749 CIGIGCCIGGGAICCIICGIGCCAGACGAGGIGAGGGGGAICCAGGCCCCCAGIIICICCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GICAACCAGIATITGIACIICIIAIIIGCICCIACCCIIAICIACCGIGACAGCIAICCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGACGGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            56;
                                                                                                                                                                                                                                                                                                                                                                                                                            Length 4011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
             1608 CATTICTGGATTATGTCCGCCGCGGACCTGGACTTGTC 1646
                                                                                                                                                                                                                                                                                                                                                                                                                                                            508;
CTITCIGGGGGCTGGTGACACCTCGATCTTGGTCCTGCC 1561
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 407.2; DB 1
Pred. No. 3.6e-80;
0; Mismatches 508
                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: L21934
DATABASE ENTRY DATE: 2001-06-18
PCT-US02-18947-388
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
26.0%;
Best Local Similarity 59.0%;
Matches 768; Conservative (
                                                                                                   PCT-US02-18947-388
                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  467
   1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                 g
   ò
```

```
1462 CAGGICAGCCIGIACIGCCAGGAGIGGIACGCACGGCGCGCACIGCCCCIIACCCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2936 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTCTGAAAATCCC 2995
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1342 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                1042 ATCTTCATGCTGCTCTTCTTTTTTTTCCTTCCATTGCTGGCTCAACGCCTTTGCC 1101
GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC 1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Breast Cancer Patients
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2636 TCCAACTATTATAGAACCTGGAATGTGGTGGTCCATGACTGGCTATATTACTATGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2756 GCTGTATCTGCTGTAGTACACGAATATGCCTTGGCTGTTTGCTTGAGTTTTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1402 CGCACCGGCCTGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2876 CGGAAAAGCCGATTIGGAAIGITCTGAIGIGGACTICICTITTCTIGGCAAIGGAGIC
                                                                                                                                                                                                                                                                                                                                                            TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2696 AAGGACTTTCTCTGGTTTTTCTCCAAGAGTTCAAATCTGCTGCCATGTTAGCTGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1282 CIGGICICCGCAGIGGCCCAIGAGIAIATCITCIGCTICGTCCIGGGGIICTICIAICCC
                                                                                              CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTTCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                            2516 GIGCIGALTCTCTTCCTTACTTTTTTTTTTGCACTGCTGAATGCCTTTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1522 ACTTICIGGGGGCIGGIGACACCICGAICTIGGICCTGCCAI 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2996 ACATTTTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGT 3037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Van de Vijver, Marc
APPLICANT: Bernards, Rene
APPLICANT: Bernards, Rene
TITLE OF INVENTION: Diagnosis and Prognosis of Bre
FILE REFERENCE: 9301-175-999
CURRENT APPLICATION NUMBER: US/10/172,118
CURRENT FILING DATE: 2002-06-14
PRIOR APPLICATION NUMBER: 60/380,770
PRIOR FILING DATE: 2002-05-14
SEQ ID NO 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 388, Application US/10172118 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Van 't Veer, Laura
Van de Vijver, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mao, Mao
Roberts, Chris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Linsley, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Dai, Hongyue APPLICANT: He, Yudong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-172-118-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
```

```
3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2395
                                                                                                                                                              2696 AAGGACTITCTCTGGITTTTCTCCAAGAGITCAAAICTGCTGCCATGTTAGCTGTCTTT 2755
                                                                    CACCTCCAGAACAAGGAAAGATTTTTATTGCAAGGCGCTCTCTTAGATGAACTGCTTG 1796
                                                                                                                          AAGTGGACCACATCAGAACAATATATCACATGTTTATTGCCCTCCTCATTCTCTTTATCC 1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2275
                                                                                                   AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                  CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGG 586
                                                                                                                                                                                                                                                                                                   646
                                                                                                                                                                                                                                                                                                                                                                                                    748
                                                                                                                                                                                                                                                                                                                                                                                                                                                    808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 981
                                                    CATCCCTGGGGAAACAGAAAGTTTTCATCATCGGCAAGTCCCTGCTTGATGAGGTGATGG 346
                                                                                                                                                                                                                                                                                                                  GTCAACCAGTATTTGTACTTCTTATTTGCTCCTTATCTACCGTGACAGCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCTTCATGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTACATTTTCAGTTCCCTATTTCTGTTTCAACATTGGGCCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                                                                   CGACGGGCCTGGGGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                   GTGTCCTGGTCTTCGAGCAGGTTAGGTTCCTGATGAAAAGCTACTCCTTGAGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2217 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GIGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2516 GTGCTGATTCTCTTACTTTTTTTGCCTTTTTTGCACTGCTGATGCCTTTTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGATGCTACGATTTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCAACTACTACCGCACTTGGAACGTGGTGCTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGATGGGCTGCGTGCTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTTC
                                                                                                                                                   TCAGCACCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                   TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTCTGT
                                                                                                                                                                                                                                                                                                                                                   ----ACGIGGCCGIGGAGCAICAGCICCCGCCGGCCTCCCGTI
     Length 4011;
   DB 41;
                            0; Mismatches 508;
Score 407.2; DB 4
Pred. No. 3.6e-80;
   26.0%;
59.0%;
                            Conservative
                Similarity
     Ouery Match
                  Local
               Best Loca
Matches
                                                   287
                                                                         1737
                                                                                                   347
                                                                                                                                                                                                                                                                                                                                                                                                   689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2636
                                                                                                                          1797
                                                                                                                                                                                                                                                                                                                         2037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1222
                                                                                                                                                                          1857
                                                                                                                                                                                                                        1917
                                                                                                                                                                                                                                                                          1977
                                                                                                                                                                                                                                                                                                  587
                                                                                                                                                                                                                                                                                                                                                   647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 809
                                                                                                                                                 407
                                                                                                                                                                                                                                                 527
                                                                                                                                                                                                 467
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음
                                                    ö
                                                                        g
                                                                                                   ò
                                                                                                                         a
                                                                                                                                                                    qq
                                                                                                                                                                                                ò
                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                 ò
```

```
ë
   2815
                                                                                                                                                                THACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGCCCTGTCCTCTGAAAAATCCC 2995
                                                                                                                                                 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            564 AAGTGGACCACATCAGAACAATATATCACATGTTTATTGCCCTCCTCATTCTCTTTATCC 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                              287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCGCCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               684 IGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              804 CTCATCCGCTGATCCGTTCTCTTCCATGGCTTTCTTTTCATGATCTTCCAGATTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  647 TCC-----ACGTGGCCGTGGAGCATCAGCTCCCGCCGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCATGCTGATACTCCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                         CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
   CGACGGGCCTGGGGCTGTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCCCTGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2022;
                                                                                                                                                                                                                                                                                                         Sequence 2800, Application US/09770173

GENERAL INFORMATION:
APPLICANT: White, David
APPLICANT: Pan, Yang
TITLE OF INVENTION: NOVEL NUCLEIC ACID MOLECULES AND USES
TITLE OF INVENTION: THEREFOR
FILE REFREENCE: 1600.2059-001
CURRENT APPLICATION NUMBER: US/09/770,173
CURRENT FILING DATE: 2001-01-26
PRIOR FILING DATE: 2000-01-28
NUMBER OF SEQ ID NOS: 3167
SOUTHWARE: FEASUSEQ for Windows Version 4.0
                                                                                                                                                                                                       ACTITCTGGGGGTGGTGACACCTCGATCTTGGTCCTCCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .1e-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25.9%; Score 405.6;
58.9%; Pred. No. 7.1e
:1ve 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           767; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                  RESULT 14
US-09-770-173-2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-770-173-2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 2800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S:
Matches 767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
   2756
                                1342
                                                                                       1402
                                                                                                                                                 1462
                                                                                                                                                                            2936
                                                                                                                                                                                                                                    2996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              527
                                                                                                                                                                                                          1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
QQ
                              οy
                                                         qq
                                                                                       δy
                                                                                                                  q
                                                                                                                                               ò
                                                                                                                                                                         q
                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

ä

```
qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                           pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                         δy
                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 109, Application PC/TUS0221664
GENERAL INFORMATION:
APPLICANT: Oligos Etc., Inc.
APPLICANT: ARROW, Amy
APPLICANT: THOMPSON, Terry
TITLE OF INVENTION: Their Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1523 GCTGTATCTGCTGTAGTACACGAATATGCCTTGGCTGTTTGCTTGAGCTTTTTCTATCCC 1582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1402 CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC 1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1462 CAGGICAGCCIGIACIGCCAGGAGIGGIACGCACGGCGCGCACIGCCCCIIACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                     1042 ATCTICATGCTGCTCTTCTTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC 1101
                                                                                                                                                                                                                                                                                                                                                                             GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC 1161
                                                                                                                                                                                                                             CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                 1162 TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
            984 ACGIGCCICGGGIACTAAAI-TCAGCIAAGGAGAAAICAAGCACIGIICCAAIACCIACA
                                                                                                                                 1043 GTCAACCAGTAITIGIACTICTIATITGCICCTACCCTIATCTACCGIGACAGCTATCCC
                                                                                                                                                                                                                  GIGCICIAIGCCIGCITCAICCIGGGCCGCCICIGIGITCCIGICTITGCCAACAIGAGC
                                                                                                                                                                                                                                                                   CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGC
689 GIGICCIGGICITCGAGCAGGITAGGITCCIGAIGAAAAGCIACICCTICCIGAGAGGG
                                                    CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                       G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                                                             AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1522 ACTITCTGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1763 ACATTTTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGT 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US02-21664-109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1342
                                                                                                                                                                                                                                                1163
                                                                                                                                                                                           1103
                                                                                                                                                                 862
                                                                                                                                                                                                                      922
                                                                                                                                                                                                                                                                           982
                                                        749
                                                                                                             809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΩD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                           ò
     δ
                                g
                                                        ò
                                                                                g
                                                                                                             ò
                                                                                                                                     g
                                                                                                                                                                 ò
                                                                                                                                                                                                                      à
```

```
1042 ATCTTCATGCTGCTCATCTTTGCCTTCCCATGCTGGCTCAACGCCTTTGCC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGAATCCCACTGTAAGATGGGGTTATGTCGCTATGAAGTTTGCACAGGTCTTTGGTTGC 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    783
                                                                                                                                                                                                                                                                                                                                                                               CATCCTGGGGAAACAGAAAGTTTTCATCCGCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  347 AGGIGCAGCATTICCGCACCAICTACCACATGTICAICGCTGGCCTGTGTGTCTTCAICA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGAGCCCTTCAGCACCCGTGCCTGTTCTTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1203 CAGGAGCCCTICAGCGCTCGTGTTCTCGTCCTATGTGTATTAACTCCATCTTCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       689 GIGICCIGGICITCGAGCAGGITAGGITCCIGAIGAAAAGCIACICCITCCIGAGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      749 CIGIGCCIGGGATCCITCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGITTCICCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGCACCCTGGCCATCGACTCATTGATGACGCCAGCCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   647 TCC------ACGTGGCCGTGGACCATCAGCTCCGCCGCCGCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    862 AGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGACGGGCCTGGGCCTGTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          844 ITCIAGGITTTGGACCAACATAIGITGTGTTAGCATATACACTGCCACCACCAGCTTCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                          484 CACCICCAGAACAAGGAAAGAITITIATIGCAAGGCGCICTCTTAGAIGAACIGCIIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rereriargeritrisecaaarireeracerrerriseaeeriserearerrer
                                                                                                                                                                                                                                                                                                                                             26;
                                                                                                                                                                                                                                                                                                  Length 2729;
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                    25.9%; Score 405.6; DB 1;
58.9%; Pred. No. 7.6e-80;
iive 0; Mismatches 509;
                                                                                                                                                                                                                          NAME/KEY: misc_feature
CTHER INFORMATION: ACAT-1: Acc. No. XM_031119
PCT-US02-21664-109
CURRENT APPLICATION NUMBER: PCT/US02/21664 CURRENT FILING DATE: 2002-07-10 PRIOR APPLICATION NUMBER: US 60/303,820 PRIOR FILING DATE: 2001_07-10
                                                                                                      PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 58.9
Matches 767; Conservative
                                                                                 NUMBER OF SEQ ID NOS: 132
SOFTWARE: Patentin version
SEQ ID NO 109
LENGTH: 2729
                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                             FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      527
```

```
1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC 1341
                                                                                                                                                                                        1402 CGCACCGGCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC 1461
                                                                                                                                                                                                                                                                                                                          1462 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCCACTGCCCCTTACCCCAGGCA 1521
1263 GTGCTGATTCTCTTTCCTTACTTTTTTGCCTTTTTTGCACTGCTGGCTCAATGCCTTTGCT 1322
                                                                                                                                                                                                                            1342 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                         1162 TCCAACTACTACGGCACTTGGAACGTGGTGCTCCATGACTGGCTGTACAGCTACGTGTAT 1221
                                                                                                                           1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                             1522 ACTITCIGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                a
                                                                        ò
                                                                                             Q
                                                                                                                           ò
                                                                                                                                                 g
                                                                                                                                                                         ò
                                                                                                                                                                                                g
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                              Op
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                             ô
```

Search completed: April 30, 2003, 15:19:12 Job time : 2519 secs

(OTASU) ANAJA 3DA9 SIHT

Thu May

ALIGNMENTS

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

APPLICANT: CARGILL, Michele
APPLICANT: CARGILL, Michele
APPLICANT: GRUPE, Andrew
APPLICANT: GRUPE, Andrew
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLO01450
CURRENT APPLICATION NUMBER: US/60/452,680
CURRENT APPLICATION NUMBER: US/60/452,680
CURRENT FILING DATE: 2003-03-07
NUMBER OF SEQ ID NOS: 116213
SOFTWARE: FASELSEQ for Windows Version 4.0 61 GAGCGCCAACCCTGTGGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA 120 61 GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCCACAGAGCCCCGGACTTGGTACAA 120 121 TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180 181 AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA 240 241 CCTCTGCCCCCACCTCCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA 300 1 ATGGAGCCAGGCGCGCCCGTCTGCGTCTGCAGGGACAGGAAGGGCTGGGGAGGGGAGGGG Score 1566.2;
Pred. No. 0;
7; Mismatches US-60-452-680-12201 ; Sequence 12201, Application US/60452680 ; GENERAL INFORMATION: 99.8%; Query Match 99.8 Best Local Similarity 99.6 Matches 1562; Conservative ; ORGANISM: Homo sapiens US-60-452-680-12201 SEQ ID NO 12201 LENGTH: 1983 TYPE: DNA 301 g qq g QQ qq δy ò ò Qγ Q Sequence 12201, A Sequence 7616, Ap Sequence 7616, Ap Sequence 5119, Ap Sequence 23912, A Sequence 1089, Ap Sequence 1313, App Sequence 25116, Ap Sequence 25116, Ap Sequence 4736, Ap Sequence 11691, A Sequence 11691, A Sequence 115001, Sequence 115003, Sequence 115005, Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution. Description /cgn2_6/ptodata/1/pna/US10_NEW_COMB.seq2:*/cgn2_6/ptodata/1/pna/US60_NEW_COMB.seq2:*/cgn2_6/ptodata/1/pna/US60_NEW_COMB.seq2:* /cgn2_6/ptodata/1/pna/US07_NEW_COMB.seq:*
/cgn2_6/ptodata/1/pna/US08_NEW_COMB.seq:*
/cgn2_6/ptodata/1/pna/US09_NEW_COMB.seq:*
/cgn2_6/ptodata/1/pna/US09_NEW_COMB.seq:*
/cgn2_6/ptodata/1/pna/US09_NEW_COMB.seq2:*
/cgn2_6/ptodata/1/pna/US09_NEW_COMB.seq3:* /cgn2_6/ptodata/1/pna/PCT_NEW_COMB.seq:*/ /cgn2_6/ptodata/1/pna/US06_NEW_COMB.seq:* US-60-452-680-115000 US-60-452-680-115001 US-60-452-680-115003 US-60-452-680-115004 US-60-452-680-115004 1 US-60-452-680-12201 1 US-60-453-135-7616 1 US-60-453-050-7616 1 US-60-949-016-5159 US-10-170-235-23912 US-10-144-771-1649 US-10-342-887-388 US-60-455-444-2252 US-60-452-680-8056 US-60-453-135-4736 US-60-453-050-4736 US-09-532-3158-1168 US-09-949-016-16901 US-10-375-682-406 US-60-440-068-313 US-10-170-235-25116 SUMMARIES Pending_Patents_NA_New:* Match Length DB 1569 1983 1607 2924 4011 4011 2738 2738 2738 2738 2738 2738 25.09 25.00 Query 1564.2 1564.2 1113.4 421.4 407.2 407. 405. 405. 405. 405. 345. Database :

Š. Result

ö

Gaps

ö

0; Indels

DB 11; Length 1983;

Sequence 82165, A Sequence 82166, A Sequence 82169, A Sequence 82170, A Sequence 82170, A Sequence 82169, A Sequence 82169, A Sequence 82169, A Sequence 82167, A Sequence 15127, A Sequence 15177, A Sequence 15177, A Sequence 15177, A Sequence 15177, A Sequence 82167, A Sequence 82167, A Sequence 82167, A Sequence 82167, A Sequence 821677, A Sequence 821777, A Sequence 821677, A Sequence 821777, A Sequence 821677, A Sequence 8216	Sequence 82171, A
US-60-453-135-82165 US-60-453-135-82166 US-60-453-135-82166 US-60-453-135-82169 US-60-453-135-82169 US-60-453-135-82169 US-60-453-050-82166 US-60-453-050-82169 US-60-453-050-82169 US-60-452-680-114999 US-60-452-680-114999 US-60-452-80164 US-60-453-135-82164 US-60-453-135-82164 US-60-453-135-82167 US-60-453-135-82167 US-60-453-135-82167 US-60-453-135-82167 US-60-532-3158-10003 US-09-532-3158-13629 US-09-532-3158-13629 US-09-532-3158-13629 US-09-532-3158-13629 US-09-532-3158-13629 US-09-532-3158-13629	US-60-453-050-82171
	11
201 201 201 201 201 201 201 201 201 201	141
0.0023 6 4 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8	0.6
200.6 200.6	140.6
000000000000000000004444 645978889010045900000000000000000000000000000000	45
sec	

301	CAGAAAGTITTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC 360
8=8	CACCATCTACCACATGTTCATCGCTGCCTGTGTCTTCATCATCACCACCCTGGCC 420
AT AT	ATCGACTTCATTGATGAGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC 480
8-8	GGACAGCTGCCATTGGCGCTGGTGACCTGGTGCCCATGTTTCTGTCCACCTGTTGGCG 540
8-8	GGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCGACGGGCCTGGGC 600
$\tilde{\mathbf{F}} - \tilde{\mathbf{F}}$	GTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCCGCTGCCGGTCCACGTGGCCGTG 660 ::
0 – 0	GAGCATCAGCTCCCGCCGGCCTCCCGTTGTGTCTGGTCTTCGAGCAGGTTAGGTTCCTG 720
4 – 4	ATGAAAAGCTACTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT 780
0 - 0	ARGGGATCCAGGCCCCCAGTTTCTCCAGCTACCTCTACTTCCTCTTCTGCCCAACACTC 840
4 – 4	ATCTACAGGAGÁCTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC 900
	TTTGCCCAGGCCCTGGGATGTGTTGTATGCCTGCTTCATCCTGGGCCCCCTCTGTGTT 960
	CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATC 1020
	CTGCATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTTGCTTCCCCCAT 1080
	TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC 1140
	TGGTGGAACTCAACGTCCTTCTCCAACTACCGCACTTGGAACGTGGTGGTGGTCCATGAC 1200 {
	TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGG 1260
7	GTAGCCATGCTGGGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATCTTCTGCTTC 1320
	GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG 1380
81	AACTTCATGATGCATGACCAGCGCACCGGCATGGAACGTGCTGATGTGGACCATG 1440

```
RESULT 2
US-60-453-135-7616
US-60-453-135-7616
Sequence 7616, Application US/60453135
Sequence 7616, Application US/60453135
Sequence 7616, Application US/60453135
Sequence 7616, Application Sequence 7616, Application Sequence 7616, Applicant: IARCUBOVA, Olga
APPLICANT: IARCUBOVA, Olga
TITLE OF INVENTION: MYCARDIAL INFARCTION, METHODS OF DETECTION AND USES THEREOF;
TITLE OF INVENTION: MYCARDIAL INFARCTION, METHODS OF DETECTION AND USES THEREOF;
CURRENT APPLICATION NUMBER: US/60/453,135
CURRENT FILING DATE: 2003-03-10
NUMBER OF SEQ ID NOS: 82762
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7616
                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 CCTCTGCCCCACCTCCCCAGGTTCCTTGAGCAGGACCAGGAGCCATCCCTGGGAAA 300
241 CCTCTGCCCCCAGCTCCCCAGGTTCCTTGAGCAGGACCAGGAGCCATCCCTGGGGAAA 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 CAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTCTTCATCATCAGCACCCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1983;
                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                            Ouery Match
99.8%; Score 1566.2;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 1562; Conservative 7; Mismatches
                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
CORGANISM: Homo sapiens
US-60-453-135-7616
                                                                                                                 1561 CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                     LENGTH: 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                          1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÓΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Óλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                            g
                                                    δy
                                                                          q
                                                                                                    δ
                                                                                                                          q
```

```
RESULT 3
US-60-453-050-7616
                                   APPLICANT:
                                                                                                        TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                     61
                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                              à
                                                                                                                                                                          g
                                                                                                                                                                                        ò
                                                                                                                                                                                                     g
                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                          QQ
                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                                                                                  QQ
                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                      1140
                                                                                                                                                                                                                                                                   1140
                                                                                                                                                                                                                                                                                                                                                                                              1440
                                                                                                                                                                                                                                                                                                                                                                                                            1440
                                                                                                                                                                                                                                                                                                             1260
                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                                                                                  1380
                                                                                                                                                                                                                                                                                                                                                                                GTCCTGGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTYATTGGAGGAATGTTG 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACTGCCCCTTACCCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCTGC 1560
                                                                                                                                                                                               CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATC 1020
                                                                                                                           840
                                                                                                                                                                                 960
              900
                            99
                                         999
                                                       720
                                                                     720
                                                                                   780
                                                                                               780
                                                                                                             840
                                                                                                                                         900
                                                                                                                                                      900
                                                                                                                                                                    960
                                                                                                                                                                                                                                                                                                                                                                                              AACTTCATGATGCATGACCAGCGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                               CTGTTTCTAGGCCAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGG
                                   GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG
                                                                                                                                                                                                                                                                                                                                                                                                      GAGCATCAGCTCCCCCCCCCCCCTTCTGTCCTCGTTCCTTCGAGCAGGTTAGGTTCCTG
                                                                                   ATGAAAAGCTACTCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                          TTTGCCCAGGCCCTGGGATGTGTGCCTCTATGCCTGCCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                                                                                                                      TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGAC
                                                                                                                                                                                                                                                                                                             TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCGAGGG
                                                                                                                                                                                                                                                                                                                                       GTAGCCATGCTGGTGTTCCTGGTCTCCGCAGTGGCCCCATGAGTATATCTTCTGCTTC
 CCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCACCTGGACGCAGGCGACGGCCTGGGC
                             TGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                         ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                          CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1141
                                                                                                                                                                                                                                                                                                                         1201
                                                                                                                                                                                                                                                                                                                                                    1261
                                                                                                                                                                                                                                                                                                                                                                               1321
                                                                                                                                                                                                                                                                                                                                                                                             1381
                                                                                                                                                                                                                                                                                                                                                                                                          1381
                                                                                                                                                                                                                                                                                                                                                                                                                          1441
                                                                                                                                                                                                                                                                                                                                                                                                                                       1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1561
              541
                                                                                                                                                      841
                                                                                                                                                                                 901
                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                     1081
                                                                                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                            1201
                                                                                                                                                                                                                                                                                                                                       1261
                                                                                                                                                                                                                                                                                                                                                                  1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1561
                            601
                                         601
                                                       661
                                                                                  721
                                                                                               721
                                                                                                             781
                                                                                                                           781
                                                                                                                                                                                               961
                                                                                                                                                                                                            961
                                                                                                                                                                    901
                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
             g
                                                                                           g
                                                                                                                         qq
                                                                                                                                                 a
                                                                                                                                                                                qq
                                                                                                                                                                                                          QQ
                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                            å
                                         g
                                                      ò
                                                                   g
                                                                                  ò
                                                                                                         ò
                                                                                                                                      ò
                                                                                                                                                                   ç
                                                                                                                                                                                              ò
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                 ç
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGACCCGACACATGGAGGCTGTGAAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCTGCCCCCCACCTCCCCCAGGTTCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 ATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCATCAGCTCCCGCCGGCCTCCCGTTGTGTCTGGTCTTCGAGCAGGTTAGGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGAAAAGCTACTCCTTCCTGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGT
                                                                                                                                                                                                                                                                                                                                                                                            GAGCGCCAACCCTGTGGAGATGGAAACACTGAGACGCACAGAGCCCCGGACTTGGTACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCACCTGGACGCGACGGGCCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGAAAGTTTTCATCCACCAAGTCCCTGCTTGATGAGCTGATGGAGGTGCAGCATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1983;
                                                                                                                                                                                                                                                                                                ö
                                                             ASSOCIATED WITH
DETECTION AND USES
                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                   DB 11;
                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                 Score 1566.2;
Pred. No. 0;
7; Mismatches
                                                          TITLE OF INVENTION: GENETIC POLYMORPHISMS
TITLE OF INVENTION: STENOSIS, METHODS OF
FILE REFERENCE: CL001457
CURRENT APPLICATION NUMBER: US/60/453,050
CURRENT FILING DATE: 2003-03-10
NUMBER OF SEQ ID NOS: 82762
SOFTWARE: FastESQ for Windows Version 4.0
Sequence 7616, Application US/60453050 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 99.6%;
Matches 1562; Conservative
                                APPLICANT: CARGILL, Michele
                                                                                                                                                                                                                     ; ORGANISM: Homo sapiens
US-60-453-050-7616
                                                LUKE, May
                                                                                                                                                                        O ID NO 7616
LENGTH: 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

ö

ö

Gaps

0;

Length 1569;

us-09-918-026a-3.rnpn

```
GAGGGGATCCAGGCCCCCAGTTCTCCAGCTACCTCTACTTCTTCTGCCCAACACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGAAAGITITICATCATCCGCAAGICCCTGCTIGATGAGCTGATGGAGGTGCAGCAITTC
                                                                                                                                                                                                                                                                                                                                                                          GGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTCTGTCCACCCTGTTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                         GAGCATCAGCTCCCGCCGCCTCCCGTTGTCTTCGAGCAGCAGGTTAGGTTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGAAAAGCTACTTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTTTCATCATCAGCACCCTGGCC
                                                                                                                                                                                                                                                                                                                                           421 ATCGACTTCATTGATGAGGGCAGGCTGCTGCAGTTTGACCTACTGATCTTCAGCTTC
                                                                                                                                                                                                              AGGGAGCTGCTGGATCGGGCCATGCGGGAGGCTATACAATCCTACCCATCACAAGACAAA
                                                                                                                                                                                                                      CCICIGCCCCCACCICCCCCAGGITCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAA
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                               3;
                                                                                 DB
                                                                               Score 1564.2;
Pred. No. 0;
0; Mismatches
                 207012
Windows Version
                                                                                99.78;
         2000-09-08
PRIOR APPLICATION NUMBER: 6(
PRIOR FILING DATE: 2000-09-(
NUMBER OF SEQ ID NOS: 207015;
SOFTWARE: FastSEQ for Window
SEQ ID NO 5159
LENGTH: 1569
                                                                                 Query Match 99.7
Best Local Similarity 99.8
Matches 1566; Conservative
                                                         Human
                                                 ; TYPE: DNA
; ORGANISM: Huma:
US-09-949-016-5159
                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                 61
                                                                                                                                                                 61
                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΫ
                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                             Dp
                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                               Dp
                                                                                                                                                                                                                                                                             Ω
                                                                                                                   δy
                                                                                                                               QQ
                                                                                                                                                 Qγ
                                                                                                                                                               QQ
                                                                                                                                                                                ò
                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                             δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THEREOF
                                                                                                                                                                                                                                                                                                                                                1440
                                                                                                                                                                                                                                                                                                                                                                                                               1260
                                                                                                                                                                                                                                                                1260
                                                                                                                                                  1140
                                                                                                                                                                                                                 TGGIGGAACTCAACGICCTICTCCAACIACTACCGCACTIGGAACGIGGIGGICCAIGAC 1200
                                                                                                                   1020
                                                                                                                                                                                                                          USES
                                   840
                                                  900
                                                                  900
                                                                                   960
                                                                                                                                                                                                                                                                                                                AACTTCATGATGCATGACCAGGGCACCGGCATGGAACGTGCTGATGTGGACCATG
                                                                                                                                                                                                                                                                                                                                                        CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATC
                   ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAAC
                                                                                            ATGAAAAGCTACTTCCTGAGAGAGGCTGTGCCTGGGAYCCTTCGTGCCAGACGAGGT
                                                            TTTGCCCAGGCCCTGGGATGTGTGTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASSOCIATED
OF DETECTION AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOHNSTON TITLE OF INVENTION: DOLYMORPHISMS IN KNOWN GENES ASS.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
TITLE REFERENCE: CLOOU307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR PILING DATE: 2000-10-20
PRIOR PELLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-949-016-5159; Sequence 5159, Application US/09949016; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATACCIAG 1569
                                                                                                                                                                                                                                                                                                                                                                                                                                  1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1561
                                                                                                                                                                                                                                                                                                                                                                                    1441
                                                                                                                                                                                                                                                                                                                                                                                                   1441
                                                                                                                                                                                                                                                                                                                                                                                                                   1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1561
                                                                                                                                                                                                                                                                                                                                   1321
                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                    1201
                                                                                                                                                                                                                                                                                    1261
                                                                                                                                                                                                                                                                                                   1261
                                                                                                                                                                                                                                                                                                                    1321
                                                                                                                                                                                                                                                                                                                                                   1381
                                                                                                                                                      1021
                                                                                                                                                                      1021
                                                                                                                                                                                     1081
                                                                                                                                                                                                      1081
                                                                                                                                                                                                                     1141
                                                                                                                                                                                                                                     1141
                                                                                                                                                                                                                                                                    1201
                                                                                                     901
                                                                                                                                      961
                                                                      841
                                                                                                                      961
                                                       841
                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                   аq
                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                   δy
                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                    ő
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                   Op
                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                   Db
                                                                                                                                                                                     ò
                                                                                                                                                                                                  qq
                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                    ò
                                                                                                                                      qq
                                                                                                    q
                                                                                                                      õ
                                                                                                                                                      Qγ
                        δ
                                     음
                                                       ò
                                                                     셤
                                                                                      à
```

780

720 720 780

540 540 009 009 099 099

480

300

DECEMBER DECEMBER	241 241 301	361 CGCACCATCTACCACATGTTCATCGCTGGCCTGTGTCTTCATCATCAGCACCCTGGCC 1	481 GGACAGCCTACGGCGCGCGGCGCCCATGTTCTGCCCTCTTGGCG 481 GGACAGCTGCTGGTGACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG 481 GGACAGCTGCCATTGCCGTGGTGCCCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCG 541 CCGTACCAGGCCTACGGCTGGGGCCAGGGGCCACGTGACGAGGGCCTGGGG 541 CCGTACCAGGCCTTACGGCTTGTGCCTACGGCCACGGGCCTGGGGCGCGCGCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGGCCTGGGCCTGGGGCCTGGGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCCTGGGCCTGGGCCTGGGCCTGGGCCTGGGCCTGGGCCTGGGCCTGGGCCTGGGCCTGGGCCTGGGCGCGCCTGGGCCGCGCCGC	601 TGTGCGCTTTTTAGCCGCCCGTGGTGCTCTGCGCGCTGCGGTCCACGTGGCGGGGGGGG		841 ATCTACAGGGAGACTTACCCTAGGACGCCCTATGTCAGGTGGATTATGTGGCCAAGAAC 90 111111111111111111111111111111111111	Db 901 TTTGCCAGGCCCTGGCATGTCTGCTCTTGTGCTTCATCCTGGCCGCCTCTGTT 960 Qy 961 CCTGTCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATC 1020 Db 961 CCTGTCTTTGCCAACATGAGCGGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATC 1020	QY 1021 CTGCATGCCACGTTGCCAGGCATCTTCATGCTTCTTTTGCCTTCCTCCAT 1080 DD 1021 CTGCATGCCACGTTGCCAGGCATCTTCATGCTCCTCTTTTGCCTTCCTCCAT 1080 DD 1021 CTGCATGCCACGTTGCCAGGATCTTCATGCTCCTCTTTTGCCTTCCTCCAT 1080 QY 1081 TGCTGCTCAACGCTTTGCCGAGATGCTACGATTTGGAGAAGTTTCTACCGGGAC 1140 DD
	TGCTGGCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGATGTTCTACCGGGAC 1140 I[TGGCTGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCGGGCCCGAGGG 1260	GTCCTGGGGTTCTTCTATCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG 1380 [11111111111111111111111111111111111	CTGTTTCTAGGCCAGGGAATCCAGGTCAGCTGTACTGCCAGGGTGGTACGCAGGGGG 1500 [GENERAL INFORMATION: APPLICANT: VENTER, J. Craig TITLE OF INVERNION: KITS, SUCH AS NUCLEIC ACID ARRAYS, COMPRISING A MAJORITY OF HUMAN TITLE OF INVENTION: KITS, SUCH AS DETECTING EXPRESSION AND OTHER USES THEREOF FILE REFERENCE: CLO01380 CURRENT APPLICATION NUMBER: US/10/170,235		tch 13. Solution 14. Score 1564.2; DB 8; Length 1983; 15. Solution 15. Solution 15. Solution 15. Solution 15. Solution 15. Solution 16. Solution 17. Solution 18. Solution 18. Solution 19. Solut
CAGGCCTGGGATGTGTG [CAACGCCTTTGCCGAG [ACAGCTACGTGTATCAC	GGTTCTTCTATCCCGTC 	AGGCCAGGAATCCAC	Oy 1561 CATACCTAG 1569 Db 1561 CATACCTAG 1569 RESULT 5 US-10-170-235-23912	TION: Craig TION: KITS, SUCH TION: TRANSCRIPY CL001380 CL001380	NUMBER OF SEQ ID NOS: 42514 SEQ ID NO 23912 LENGTH: 1983 TYPE: DNA ORGANISM: HUANA	Query Match Query Match Best Local Similarity 99.8%; Matches 1566; Conservative 1 ATGGAGCAGGGGGGCCGTCTC

```
1153
                                                                                                                                                                                                                                                                                                                                                                   1191
                                                                                                                                                                                                                                                                                                                                                                                            1251
                                                                                                                                                                                                                                                                                                                                                                                                        1273
                                                                                                                                                                                                                                                                                                                                                                                                                    1311
                                                                                                                                                                                                                                                                                                                                                                               1213
                                                                                                                                                                                                                                                                                                                                                                                                                                 1333
                                                                                                                                                                                                                                                                                                                                                                                                                                            1371
                                                                                                                                                                                                                831
                                                                                                                                                                                                                            853
                                                                                                                                                                                                                                        891
                                                                                                                                                                                                                                                    913
                                                                                                                                                              711
                                                                                                                                                                           733
                                                                                                                                                                                                    793
                                                                                                                          613
                                                                                                                                                  673
           351
                                    411
                                                445
                                                             471
                                                                                     531
                                                                                                  565
                                                                                                              591
                                                                                                                                      651
325
                        385
                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                                                                                                         Db
                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                           Dp
                                                                                                                                                                                                                                        Dp.
                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                       δy
                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                    ÓΫ
                                                                                                                                                                                                                                                                             δλ
                                                            g
                                                                                   QQ
                                                                                                 δ
                                                                                                             a
                                                                                                                         δλ
                                                                                                                                     qq
                                                                                                                                                  Q
                                                                                                                                                             Op
                                                                                                                                                                           ά
                                                                                                                                                                                      qq
                                                                                                                                                                                                    Ωÿ
                                                                                                                                                                                                                             δ
        g
                                                Qy
                                                                          δλ
                        οŽ
                                   QQ
                                                                                                                                                                                                                                                                                                                        2,
                                                                                                   1440
                                                                                                                                                                                                                                                                                                                                                                    264
                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                     84
                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTTGAGCAGGACCCAGGAGCCATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAG
                                                                                                                                                                                                                                                                                                                                                                                       AAGGCACAATTGCTGGAGCAAGCGCAGGGACAACTGAGGGAGCTGCTGGATCGGGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                               CGGGGGCTATACATCCTACCCAGCATCACAAAACATCTGCCCCCACCTCCCCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                      AACACTGAGACGCACAGAGCCCCGGACTTGGTACAATGGACCCGACATGGAGGCTGTG
                                                                                                                                                                                                                                                                                                                                     CTGCAGAGGACAGAAGGGCTGGGAGGGGAGCGGGAGCGCCAACCCTGT---GGAGATGGA
                                                                                                  CACTGCCCCTTACCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGC
                                                                                                                                                          GTCCTGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTG
                                                                                                                                                                                                                                          THEREOF
                                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                             Length 1607;
                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                         SYSTEM AND USES
                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                            Score 1113.4; DB 9;
Pred. No. 3.4e-255;
); Mismatches 246;
                                                                                                                                                                                                                      GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: HUMAN GENOME DISCOVERY SYSTILE REFERENCE: CLOO1321
CURRENT APPLICATION NUMBER: US/10/144,771
NUMBER OF SEQ ID NOS: 47235
SEQ ID NO 5649
                                                                                                                                                                                                                                                                                                                         .
0
                                                                                                                                                                                                                                                                                                             71.0%;
83.2%;
                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                    CATACCTAG 1569
                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 1296; Conserv
                                                                                                                                                                                                                                                                                           ; ORGANISM: HUMAN
US-10-144-771-5649
                                                                                                                                                                                                                   US-10-144-771-5649
                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                          265
                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                                                                85
                                                                                                                                                                                                                                                                                                                                                                            111
                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                     171
                                                                                                                                                                                                                                                                                                                                                                                                                  205
                                                                                                                                                                                                                                                                                                                                                                                                                                                     291
                                                                                                                                                                                                                                                                                                                                                   51
                                                                                                                1381
                                                                                                                                         1441
                                                                                                                                                      1501
                                                                                                                                                                  1501
                                                                                                                                                                                           1561
                                                                                                                             1441
                                                                                                                                                                              1561
              1141
                                                                                        1321
                                                                                                    1381
                           1201
                                        1201
                                                    1261
                                                                1261
                                                                            1321
   1141
                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                            임
                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                  g
                                                                                                                                                                                          g
                                                                                                                                      - G
                                                                                                                                                      ò
                                                                                                                                                                               ŏ
                           ŏ
                                       g
                                                    οy
                                                                qq
                                                                            ò
                                                                                        g
                                                                                                    ò
                                                                                                                g
                                                                                                                              ò
   ŏ
```

```
1070
                                                                                                                                                                                                                                                                                                                                                                                                                                             1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGTCCTTCTCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGC:1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1430
                                                                                                                                                                                                                                                                                                                                                                                       1010
                                                                                                                                                                                                                                                                                                                                                                     972
                                                                                                                                                                                  GCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGACCATCAGCTC 672
                                                                                                                                                612
                                                                                                                                                                650
                                                                                                                                                                                                                                                          TCCTTCCTGAGAGAGGCTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAG 792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTGTGTTCCTGGTCTCCGCAGTGGCCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTTC
                                                                                                                                                                                                                                                                     CTGGGATGTGTGTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTTTTGCC
                                                                                                                                                                                                                                                                                                                                                                               973 AACAIGAGCCGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATCCTGCATGCCACG
                                                                                                                                                                                                                                                                                                                                                                                                                  CCGCCGGCCTCCCGTTGTGTCTTGGAGCAGGTTAGGTTCCTGATGAAAAGCTAC
                                   CTGCTGCTGGAGTTTGACCTACTGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTG
                                                                                 GCCA-------GGGGCACCTGGACGCAGGCGACGGCCTGGGCTGTGCGCTTTTA
                                                                                                                                                           ACCTGGGTGCCCATGTTTCTGTCCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGG
```

```
GAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTCTATCCTGCATGCCACGTTGCCAGGCA 1042
                                                                                                                                                                                                                      CCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTATC 1222
                                                                                                                                                                                                                                                                                                                                                    AGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTGTTCC 1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1283 TGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCCG 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAGC 1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATCC 1462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCGCACTGCCCCTTACCCCCAGGCAA 1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGTGCTTTTATTCTCAAGAGTGGTATGCCCGCCAGCACCTGTCTCTGAAGAACCCTA 1607
                   TCTTCATGCTGCTGCTCATCTTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCCG 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                      1308 AAGACCTGCTCTGGTTTTTCTCGAAGAGGTTCAAATCTGCCGCCATGCTGGCCGTCTTCG 1367
                                                                                    GGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGTG 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Breast Cancer Patients
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCTGTCGGCTGTGGTGCACGAGTATGCCCTCGCCATCTGCCTGAGTTACTTCTACCCGG
                                                                                                                                                      AGGAGCCCTTCAGTGCTCGTGTCCTGGTCTTTAACTCCATCTTGCCAGGTG
                                                                    TGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCC 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATITICIGGATTATGICCGGCCGCGGACCTGGACTIGIC 1646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Mao, Mao
APPLICANT: Roberts, Christopher J.
APPLICANT: Van 't Veer', Laura Johanna
APPLICANT: Van 't Veer', Laura Johanna
APPLICANT: Van 't Veer', Laura Johanna
APPLICANT: Van de Vijver, Marc J.
APPLICANT: Bernards, Rene
TITLE OF INVENTION: Diagnosis and Prognosis of Bre
FILE REFERENCE: 9301-188-999
CURRENT APPLICATION NUMBER: 60/298,918
PRIOR APPLICATION NUMBER: 60/380,710
PRIOR FILING DATE: 2001-06-18
PRIOR FILING DATE: 2002-06-14
PRIOR FILING DATE: 2002-06-14
PRIOR FILING DATE: 2002-06-14
PRIOR FILING DATE: 2002-06-14
NUMBER OF SEQ ID NOS: 2699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 388, Application US/10342887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Dai, Hongyue
APPLICANT: He, Yudong
APPLICANT: Linsley, Peter S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
US-10-342-887-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1403
                                                                                                                                                                                                                                                                                                   1188
                                                                                                                                                                                                                                                                                                                                    1163
                                                                                                                                                                                                                                                                                                                                                                    1248
                                                                                                                                                                                                                                                                                                                                                                                                     1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1463
                                 948
                                                                                                                                                                                                                                    1128
                                                                                                                                                                                                                                                                     1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1523
                                                                    923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                               g
                                                                  δ
                                                                                                qq
                                                                                                                                   ŏ
                                                                                                                                                             g
                                                                                                                                                                                                 δy
                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
;
                 CAGGGAATCCAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGCGCACTGCCCCTTA 1512
                                                                                    688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTGGACCACATCAGAACAATTTACCACATGTTCATCGCACTCCTCATCCTATTCGTCC 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTACCCATTGATCTATTCCCTTGTCCATGCTTGCTCTTTAGTCTTTCAACTTGGAG 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    768 TCATTCTGATACTGGAACAGATTĊTTTGATAATGAAGGCTCACTCATTGTCAGAGAGA 827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCC-----CCCAGTT 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATATCCCACGAGTACTAAATGCAGCCAAGGAGAAATCAAGCAAAGATCCACTACCCACAG 887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATCCCTGGGGAAACAGAAAGTTTTCATCATCGCCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTCCAGAACAAGGGAAGATTTTTATTTCAAGGCAGTCTCTTTTAGACGAGCTGTTTG 407
                                                                                                                                   CCCCAGGCAACTTTCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCATACCTAG 1569
                                                                                                                                                   TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTAGGTTTTGTGCCAACATACGTTGTCTTAGCATACACACTGCCACCAGCCTCCCGGT
 CATGACCAGCGCACCGGCCTGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTACACTGTCAATCCCCTATTTCCTGTTCCAGCGATGGGCCCACGGTTACAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----CACCTGGACGCAGGCGACGGGCCTGGGCTGTGCGCCTTTTAGCCGCCCACGCCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCTCTGCGCGCTGCCGGTCCACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGG-------
                                                                                                                                                                                                                                            Seguence 10898, Application US/10144771
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig
TITLE OF INVENTION: HUMAN GENOME DISCOVERY SYSTEM AND USES THEREOF
FILE REFERENCE: CL001321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 421.4; DB 9;
Pred. No. 3.4e-90;
0; Mismatches 506;
                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/144,771
CURRENT FILING DATE: 2002-05-15
NUMBER OF SEQ ID NOS: 47235
SEQ ID NO 10898
LENGTH: 2924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26.9%;
ilarity 59.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 769; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: DNA
; ORGANISM: HUMAN
US-10-144-771-10898
                                                                                                                                                                                                                                  US-10-144-771-10898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              648
                                                                1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         888
1393
                                                                                                  1491
                                                                                                                                   1513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                             g
                                                                ò
                                                                                                8
                                                                                                                                ò
                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

œ

```
647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Оp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                      qq
                                                                                                                                                                                          δ
                                                                                                                                                                                                          g
                 d
                                   Qγ
                                                     g
                                                                         Ωÿ
                                                                                           Pp
                                                                                                                δŽ
                                                                                                                               Op
                                                                                                                                                     δ
                                                                3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTTTCTGCTGCCATGCCACGTTGCCAGGC 1041
                                                                                                                                                                                                                     1976
                                                                                                                                                                                                                                                          2036
                                                                                                                                                                                                                                                                                                                                                                          2216
                                                                                                                                                                        2275
                                                                                                       688
                                                                                                                                                                                                                                                                                                                                                                                              808
                                                                                                                                                                                                                                                                                                                                                                                                                                  861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             981
                                                                                                                                                                                                                                                                              646
                                                                                    346
                                                                                                                         406
                                                                                                                                                               466
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                 AICTICAIGCIGCIGCICAICTITGCCIICCICCAIIGCTGGCICAACGCCIIIGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                       CTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGGCCACTGGCTATAGCAAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGACCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Grecrearrectractrititiecerrrecarecterarectritiec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                CTCATCCGCTGATCCGTTCTCTTCCATGGCTTTCTTTCATGATCTTCCAGATTGGAG
                                                                                                                                                                                                                                                                                                                                                       CTGTGCCTGGGATCCTTCGTGCCAGAGGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                   G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                          AGGIGCAGCAITICCGCACCAICTACCACATGIICAICGCIGGCCTGIGIGITCAICA
                                                                                                                                                                                                                                                                                                                   TCC--------ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                    287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCGCCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                              TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                    TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                               CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                              CGACGGGCCTGGGGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                    TICTAGGITTIGGACCAACATATGITGTGTTAGCATATACACTGCCACCAGCTTCCCGGT
                                                                26;
                                              4011;
                                               Length
                                                                 Indels
                                             Score 407.2; DB 9;
Pred. No. 9.2e-87;
0; Mismatches 508;
                                              Query Match 26.0%;
Best Local Similarity 59.0%;
Matches 768; Conservative
; LENGTH: 4011
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-342-887-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1162
                                                                                                                                                                                                                                                                                                                                      2097
                                                                                                                                                                                                                                                                                                                                                                            2157
                                                                                                                                                                                                                                                                                                                                                                                                                 2217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    982
                                                                                                        1737
                                                                                                                           347
                                                                                                                                             1797
                                                                                                                                                                                   1857
                                                                                                                                                                                                                                                           1977
                                                                                                                                                                                                                                                                                                 2037
                                                                                                                                                                                                                                                                                                                                                                                               749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              922
                                                                                                                                                                                                                        1917
                                                                                                                                                                                                                                                                                                                                                          689
                                                                                                                                                                                                                                                                                                                                                                                                                                    809
                                                                                                                                                                                                      467
                                                                                                                                                                                                                                          527
                                                                                                                                                                                                                                                                               587
                                                                                                                                                                                                                                                                                                                    647
                                                                                                                                                                 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                 g
                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                 Dρ
                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                        g
                                                                                                                                            g
                                                                                                                                                                 ò
                                                                                                                                                                                                     δλ
                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                    ò
                                                                                      ŏ
                                                                                                                           ò
```

```
Sequence 313, Application US/60440068
GENERAL INFORMATION:
APPLICANT: NADIER, STEVEN G.
APPLICANT: NADIER, STEVEN G.
APPLICANT: CARMAN, ULLE
TITLE OF INVENTION: POLYNUCLECTIDES AND POLYPEPTIDES ASSOCIATED WITH THE
FITLE OF INVENTION: NF.RB PATHWAY
FILLE REFERENCE: 3053-4191
CURRENT APPLICATION NUMBER: US/60/440,068
NUMBER OF SEQ ID NATE: 2003-01-14
NUMBER OF SEQ ID NOS: 746
SOFTWARE: PALENTIN Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2096
                                                                                                                                                                   1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       646
                                                                                                                                                                                                                                                        1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---ACGIGGCCGIGGAGCAICAGCICCCGCCGGCCTCCCGIT 688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1917 TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1977 CTACATITICAGIICCCIAITITCIGITICAACATIGGGCCACIGGCTATAGCAAGAGIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGACGGGCCTGGGGCTGTGCGCCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                     2936 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTCAAAAAATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGGAGTTTGACCTAC
1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCGAGGGGTAGCCATGCTGGGTGTTC
                                                                                                         CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 347 AGGIGCAGCAITITCCGCACCAICTACCACAIGTICAICGCTGGCCTGTGICTICAICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                        2696 AAGGACTITCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTT
                                                                                                                                                                                                              2816 GIGCICITCGIGCICITCAIGITCITIGGAAIGGCITICAACITCAITGICAAIGAIAGI
                                                                                                                                                                                                                                                        CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                   2876 CGGAAAAAGCCCGATTTGGAATGTTCTGATGTGGACTTCTCTTTTCTTGGGAATGGACTC
                                                                                  CIGGICICCGCAGIGGCCCAIGAGIATAICIICIGCTICGICCIGGGGIICIICIAICCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 4011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                  2996 ACATTITIGGATTATGTCCGGCCACGTTCTTGGACTTGTCGT 3037
                                                                                                                                                                                                                                                                                                                                                                                                                                ACTITICTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches 508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 407.2; DB 1
Pred. No. 9.2e-87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 26.0%;
Best Local Similarity 59.0%;
Matches 768; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo sapiens
US-60-440-068-313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 9
US-60-440-068-313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Pa
SEQ ID NO 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2037
                                                                                       1282
                                                                                                                             2756
                                                                                                                                                                                                                                                                                                                                                1462
                                                                                                                                                                                                                                                                                                                                                                                                                                   1522
                                                                                                                                                                          1342
                                                                                                                                                                                                                                                             1402
```

ä

σ

ë,

Gaps

406

466

736 586 856 688

```
GTCAACCAGTATTTGTATTTGCTCCTACCCTTATCTACCGTGACAGCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTTCATGCTGCTCATCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                        347 AGGIGCAGCATTICCGCACCATCIACCACATGTICATCGCTGGCCTGTGTGTTTCATCA
                                                                                                                                                                                                                                                                                                                                       TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                   CCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                    CTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGGCCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCATCCGCTGATCCGTTCTTCTTTCATGATCTTCCAGATTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              857 TTCTAGGTTTTGGACCAACATATGTTGTTGTTAGCATATACACTGCCACCAGCTTCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGACGCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1162 TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                             TCAGCACCCTGGCCATCGACTTCATTGATGAGGCAGGCTGCTGCTGGTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                               TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                    CGACGGGCCTGGGCTGTGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                             26;
                                                                                                      Length
                                                                                                                              Indels
                                                                                                    œ
                                                                                                   Score 405.6; DB Pred. No. 1.9e-86;
                                                                                                                             0; Mismatches
TE: 2003-03-17
NOS: 42514
                                                                                                    25.9%;
58.9%;
                                                                                                                              Conservative
CURRENT FILING DATE:
NUMBER OF SEQ ID NOS
                                                                                                               Local Similarity
                                                              ; ORGANISM: HUMAN US-10-170-235-25116
          NUMBER OF SEQ ID
SEQ ID NO 25116
LENGTH: 2738
                                                                                                   Query Match
Best Local Simi
Matches 767;
                                                  TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         960
                                                                                                                                                                                                                                   557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            749
                                                                                                                                                                                                                                                                                     617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1336
                                                                                                                                                                                                                                                           407
                                                                                                                                                                                                                                                                                                               467
                                                                                                                                                                                                                                                                                                                                         577
                                                                                                                                                                                                                                                                                                                                                                 527
                                                                                                                                                                                                                                                                                                                                                                                          737
                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1102
                                                                                                                                                                                                                                                                                                                                                                                                                    587
                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                      С
                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-170-235-25116
Sequence 25116, Application US/10170235
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig
TITLE OF INVERTION: KITS, SUCH AS NUCLEIC ACID ARRAYS, COMPRISING A MAJORITY OF HUMAN
TITLE OF INVENTION: TRANSCRIPTS, FOR DETECTING EXPRESSION AND OTHER USES THEREOF
FILE REPERENCE: CL001380
CURRENT APPLICATION NUMBER: US/10/170,235
                                                             2216
                                                                                                              2275
                                                                                                                                                                                                                                                                       2455
                                                                                                                                                                                                                                                                                                 1041
                                                                                                                                                                                                                                                                                                                          2515
                                                                                                                                                                                                                                                                                                                                                    1101
                                                                                                                                                                                                                                                                                                                                                                              2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1461
                                                                                                                                                     2276 GTCAACCAGTATTTGTACTTCTTATTTGCTCCTTATCTACCGTGACCAGTATTCCC 2335
                                                                                                                                                                                                      2336 AGGAATCCCACTGTAAGATGGGGTTATGTCGCTATGAAGTTTGCACAGGTCTTTGGTTGC 2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1342 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1462 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                                                                              981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTTC 1281
                                                                                                                                                                                           921
                                                  1402 GGCACCGGCCTGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                            2217 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGCACTGTTCCAATACCTACA
                                                                                                                                                                                                                                                                                                CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                  1042 ATCTTCATGCTGCTGCTCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                   GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                  2936 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTGAAAAATCCC
CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                        G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCCT
                                                                                                                                                                                                                                              GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGTCTCCGCAGTGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGCTCTTCGTGCTCTTCATGTTCTTTGGAATGGCTTTCAACTTCATTGTCAATGATAGT
                                   AGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTITCIGGGGGCTGGTGACACCTCGATCTIGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                             2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2996
                                   689
                                                                                                                                      - 809
                                                                                                                                                                                          862
                                                                                                                                                                                                                                            922
                                                                                                                                                                                                                                                                                                982
                                                                                                                                                                                                                                                                                                                                                                                                     1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2876
          g
                                   ò
                                                         9
                                                                                 ò
                                                                                                           a
                                                                                                                                     ò
                                                                                                                                                           g
                                                                                                                                                                                         δ. q
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
```

1275 1101

1161

1041

1095

921

Thu May

a

g ò 염 ò g ò g

g ò g

δ

```
1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1342 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1462 CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1161
                                                                                                                                                                                                                                                                                                                                                     1576 GIGCICTICGIGCICTICAIGTICTITGGAATGGCTTICAACTICATGAATGATAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCACCGGCCTGGCATGGTACTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                        GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1042 AICTUCATGCIGCICATCTICTICCCTICCATIGCTGGCTCAACGCCTTIGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1162 TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1396 TCCAACTATTATAGAACCTGGAATGTGGTGCACCATGACTGGCTATATTACTATGCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCCGAGGGGTAGCCATGCTGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGGTTCTTCTATCCC
                                                                                                                                                     749 CIGIGCCIGGGAICCTICGIGCCAGACGAGGIGAGGGGAICCAGGCCCCCAGITICICCA
                                                                                                                                                                                                                G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                             CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTTATCCTGCATGCCACGTTGCCAGGC
CTCATCCGCTGATCCGTTCTCTTCCATGGCTTTCTTTTCATGATCTTCCAGATTGGAG
                                                 -ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8056, Application US/60452680; GENERAL INFORMATION:
APPLICANT: CARGILL, Michele; APPLICANT: GRUPE, Andrew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
US-60-452-680-8056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1756
                                                                                                                                                                                                                                                                                                                                                                                                  982
                                                                                                                                                                                                                                                                                                                                                                                                                                1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1276
                                                                                                                                                                                                                                                                                                                                        922
                                                                                                689
                                                                                                                                                                                                                     809
                                   647
                                                                 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                δy
                                                              g
                                                                                              QΥ
                                                                                                                           qq
                                                                                                                                                         δ
                                                                                                                                                                                     qq
                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                     pp
                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                   P
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 252, Application US/60455444

GENERAL INFORMATION:
APPLICANT: CARGILL, Michele
APPLICANT: BEGOVICH, AM
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: RHEUMATOID ARTHRITIS, METHODS OF DETECTION AND USES THEREOF
FILER REFERENCE: CL001455, 444
CURRENT APPLICATION NUMBER: US/60/455, 444
CURRENT FILING DATE: 2003-03-18
NUMBER OF SEQ ID NOS: 50986
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2252
LENCH: 2738
HADD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3,
                                                                                                                                                                                                                                     1461
                                                                                                                                             1575
                                                                                                                                                                                                   1576 GIGCTCTTCGTGCTCTTCATGTTCTTTGGAATGCCTTTCAACTTGTCAATGGT 1635
                                                                                                                                                                                                                                                                                                                CGACGGGCCTGGGCTGTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCTGCGCGG 646
                                                                                                                                                                                                                                                                                             CAGGICAGCCIGIACTGCCAGGAGIGGIACGCACGCGGCGCACTGCCCCTIACCCCAGGCA 1521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    287 CATCCCTGGGGAAACAGAAAGTTTTCATCCGCCAAGTCCCTGCTTGATGAGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGCACCCTGGCCATCGACTTCATTGATGAGGCCAGGCTGCTGCTGGAGTTTGACCTAC 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    retettatectitiescaaatticctaccettgttissaccississatcatsticcist 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACCCTGTTGGCGCCCGTACCAGGCCCTACGGCTGTGGGCCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTACATTTTCAGTTCCCTATTTCTGTTTCAACATTGGGCCACTGGCTATAGCAAGAGTT
                                                                                                                                                                                                                                                     1396 TCCAACTATTATAGAACCTGGAATGTGGTGCATGACTGGCTATATTACTATGCTTAC
                                                                                                                CIGGICICCGCAGIGGCCCAIGAGIAIAICTICTGCTTCGICCIGGGGTICTICIAICCC
                                                                                                                                 GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                                                                                                                                                                     1402 CGCACCGGCCTGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                   1456 AAGGACTITCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTTTT
                                                      CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 10; Length 2738;
                                                                                                                                                                                                                                                                                                                                                          1522 ACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                              509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 405.6; DB 1
Pred. No. 1.9e-86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25.9%;
58.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 58.9 Matches 767; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens
US-60-455-444-2252
                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
US-60-455-444-2252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    587
                                                                                                                                                                                1342
                                                                                                                                                                                                                                                                                                  1462
                                                                                                                                                                                                                                                                                                                                                                                        1756
                                                                                                                    1282
```

g ŏ g δ q ŏ g ò qq ò

ò

```
CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGGCCAGGGGCCACCTGGACGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-60-453-135-4736; Sequence 4736, Application US/60453135; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25.9%;
58.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 25.9
Best Local Similarity 58.9
Matches 767; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo sapiens US-60-453-135-4736
                                                                                                                                                                                                                        1342 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 347
                                                                                                                                                                                             1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                527
                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ob
                            Dp
                                                        \delta
                                                                                   g
                                                                                                            δ
                                                                                                                                       g
                                                                                                                                                                  δy
                                                                                                                                                                                           g
                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                   δy
                                                                                                                                                                                                                                                                                                                                                                                         δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REPERENCE: CLOO1-36.
CURRENT APPLICATION NUMBER: US/60/452,680
CURRENT FILING DATE: 2003-03-07
NUMBER OF SEQ ID NOS: 116213
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8056
                                                                                                                                                                                                            3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            977 ACGTGCCTCGGGTACTAAAT-TCAGCTAAGGAGAAATCAAGGACACTGTTCCAATACCTACA 1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1042 ATCITCAIGCTGCTCAICTITCTITGCCTTCCTCCAITGCTCGCTCAACGCCTITGCC 1101
.
1276 GIGCTGAITCTCTTATTITTTTTTTTTTTTTTTGCTTGGCTCAATGCCTITGCT 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGAGCCCTTCAGCACCCGTGCCCTGGTCTCTATCCTGCATGCCACGTTGCCAGGC 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            916
                                                                                                                                                                                                                                                                                                         AAGTGGACCACATCATAATATATCACATGTTTATTGCCCTCCTCATTCTCTTTATTC 616
                                                                                                                                                                                                                                                                                                                                                                                                     526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     689 GIGICCIGGICTICGAGCAGGITAGGITCCIGAIGAAAAGCIACICCITCCIGAGAGAGG 748
                                                                                                                                                                                                                                                                                           TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC 466
                                                                                                                                                                                                                                                                                                                                                                                                                              rererrangerringecaaarreceracerrerresaceresacerearcarerrerer 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGGCACCTGGACGCAGG 586
                                                                                                                                                                                                                                                              749 CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 809 G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        862 AGGACGCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                     CATCCCTGGGGAAACAGAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                     TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCATCCGCTGATCCGTTCTTTCTTTTCATGATCTTCCAGATTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCC-----ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGACGGGCCTGGGCGCTTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCGCTGCCGG
                                                                                                                                                                                Length 2738
                                                                                                                                                                               Score 405.6; DB 11; Length
Pred. No. 1.9e-86;
0; Mismatches 509; Indels
                                                                                                                                                                               Query Match . 25.9%;
Best Local Similarity 58.9%;
Matches 767; Conservative
                                                                                                                          TYPE: DNA
CORGANISM: Homo sapiens
US-60-452-680-8056
                                                                                                                                                                                                                                     287
                                                                                                                                                                                                                                                              497
                                                                                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                                                    557
                                                                                                                                                                                                                                                                                                                                               407
                                                                                                                                                                                                                                                                                                                                                                                                     467
                                                                                                                                                                                                                                                                                                                                                                                                                               677
                                                                                                                                                                                                                                                                                                                                                                                                                                                          527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1156
                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                     ò
```

```
APPLICANT: CARGILL, Michele
APPLICANT: CARGILL, Michele
APPLICANT: IAKOUBOVA, O19a
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: MYCCARDIAL INFARCTION, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001456
CURRENT APPLICATION NUMBER: US/60/453,135
CURRENT FILING DATE: 2003-03-10
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 4736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1461
                                                                                                                                                                          1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1696 TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCAGCACTGTCCTCTGAAAAATCCC 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  287 CATCCCTGGGGAAACAGAAAGTTTTCATCATCCGCAAGTCCCTGCTTGATGAGGCTGATGG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
1396 TCCAACTATTATAGAACCTGGAATGTGGTGCTCCATGACTGGCTATATTACTATGTATCTAC
                                                                                                                                                                                                                                                                                                                                                                                                        1576 GIGCTCTTCGTGCTCTTCATGTTTTGGAATGGCTTTCAACTTCATGTCAATGATAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCGCACTGCCCCTTACCCCCAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGGCCCGAGGGGTAGCCATGCTGGTGTTC
                                                                                                                                                                                                             1456 AAGGACTITCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTT
                                                                                                                                                                                                                                                                             1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC
                                                                                                                                                                                                                                                                                                             GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGTGCAGCATTTCCGCACCATCTACCACATGTTCATCGCTGGCCTGTGTGTCTTCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1162 TCCAACTACTACCGCACTTGGAACGTGGTGGTCCATGACTGGCTGTACAGCTACGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCTTATGCTTTTGGCAAATTTCCTACCGTTGTTTGGACCTGGTGGATCATGTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTITCTGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 405.6; DB 11;
Pred. No. 1.9e-86;
0; Mismatches 509;
```

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                             δλ
                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                            염
                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                           Óλ
                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCAGCACTGTCCTCTGAAAAATCCC 1755
                                                                                                                                                                                                                                                                                                              1215
                                                                                                                                                                                                                                                                                                                                                                             1101
                                                                                                                                                                                                                                                                                                                                                                                                                      1161
                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGTGTTC 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGTTCTTCTATCCC 1341
                                                                                                                                                                                 1035
                                                                                                                                                                                                                  748
                                                                                                                                                                                                     861
                                                                                                                                                                                                                                                                                         981
                                                                        688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1576 GIGCICTICGIGCICTICAIGITCTITGGAAIGGCITICAACIICATIGICAAIGAIAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGCGGCGGCGCTTACCCCAGGCA
                                                                                                                 GIGICCIGGICITCGAQCAGGIIAGGIICCTGAIGAAAAGCIACTCCTTCCTGAGAGGGGGG
                                                                                                                              977 ACGIGCCICGGGIACIAAAI-TCAGCIAAGGAGAAAICAAGCACIGIICCAAIACCIACA
                                                                                                                                                                                                                                                                                                       ATCTTCATGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                         GIGCIGATICICITACTITITITICCTITITICACCTCGCIGCTCATGCCTTTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                       GAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGTGGAACTCAACGTCCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCAACTACTACCGCACTTGGAACGTGGTGCTCCATGACTGGCTGTACAGCTACAGTGTATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGGACTTTCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTT
                                                                                           TICTAGGITITIGGACCAACATAIGITGTGTTAGCATATACACTGCCACCAGCTTCCCGGT
                                                                                                                                                                                                     G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCTACAGGGAGACTTACCCT
                                                                                                                                                                                                                                               AGGACCCCTATGTCAGGTGGAATTATGTGGCCAAGAACTTTGCCCAGGCCCTGGGATGT
                                                                                                                                                                                                                                                                                         GTGCTCTATGCCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC
                                                                                                                                                                                                                                                                                                                                    CGAGAGCCCTTCAGCACCCGTGCCCTGGTGCTCTATCCTGCATGCCACGTTGCCAGGC
CTGTGCCTGGGATCCTTCGTGCCAGACGAGGTGAGGGGATCCAGGCCCCCAGTTTCTCCA
                               CGACGGGCCTGGGGCTGTTTTAGCCGCCCACGCCGTGGTGCTCTGCGCCGCTGCCGG
                                                                        TCC---------ACGTGGCCGTGGAGCATCAGCTCCCGCCGCCTCCCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTITCIGGGGGCTGGTGACACCTCGATCTTGGTCCTGCCAT 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACATTTTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGT 1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1756
                                                                                                                                                                                                                                                                       1096
                                                                                                                                                                                                                                                                                                                                                           1216
                                                                                                                                                                                                                                                                                                                                                                               1042
                                                                                                                                                                                                                                                                                                                                                                                                     1276
                                                                                                                                                                                                                                                                                                                                                                                                                           1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1222
                                                                                                                                                                                                                                                 862
                                                                                                                                                                                                                                                                                                                 1156
                                                                                                                                                                                                                                                                                                                                                                                                                                              1336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1162
                                                                          647
             737
                                                                                                857
                                                                                                                      689
                                                                                                                                                                                                         809
                                                                                                                                                                                                                                                                                             922
                                                                                                                                                                                                                                                                                                                                       982
                                                       197
                                  587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Оþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                               Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                           QQ
                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                          a
                                                                                                                                                                                   .p
                                                                                                                                                                                                         δ
                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                      요
                                                                                                                      ò
                                                                                                                                                                 ò
                                                                             ò
```

3, 1155 1035 921 CATCCCTGGGGAAACAGAAAGTTTTCATCCTCCCAAGTCCCTGCTTGATGAGCTGATGG 346 AGGIGCAGCATITICCGCACCATCIACCACATGITCATCGCIGGCCTGTGTGTCTTCATCA 406 CCACCCTGTTGGCGCCGTACCAGGCCCTACGGCTGTGGGCCAGGGGCCACCTGGACGCAGG 586 977 ACGIGCCICGGGIACIAAAT-TCAGCIAAGGAGAAATCAAGCACIGTICCAATACCIACA AGGACGCCCTATGTCAGGTGGAATTATGTGGCCCAAGAACTTTGCCCAGGCCCTGGGATGT 922 GTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTGTCTTTGCCAACATGAGC ASSOCIATED WITH DETECTION AND USES THEREOF CTACATITICAGITCCCTATITICIGITTCAACATIGGGCCACTGGCTATAGCAAGAGTT 749 CIGIGCCIGGGAICCITCGIGCCAGACGAGGIGAGGGGGAICCAGGCCCCCAGTITCICCA --ACGTGGCCGTGGAGCATCAGCTCCCGCCGGCCTCCCGTT G-----CTACCTCTACTTCCTCTTCTGCCCAACACTCATCTACAGGGAGACTTACCCT TCAGCACCCTGGCCATCGACTTCATTGATGAGGGCAGGCTGCTGCTGGAGTTTGACCTAC TGATCTTCAGCTTCGGACAGCTGCCATTGGCGCTGGTGACCTGGGTGCCCATGTTTCTGT CGACGGGCCTGGGCTGTGCGCTTTTAGCCGCCCACGCCGTGGTGCTCTGCGGCGCTGCCGG Length 2738, DB .11; Score 405.6; DB.11; Pred. No. 1.9e-86;); Mismatches 509; Sequence 4736, Application US/60453050
GENERAL INFORMATION:
APPLICANT: CARGILL, Michele
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASS
TITLE OF INVENTION: STENOSIS, METHODS OF DET
TITLE REFERENCE: CL001457
CURRENT APPLICATION NUMBER: US/60/453,050
CURRENT FILING DATE: 2003-03-10
NUMBER OF SEQ ID NOS: 82762
SOFTWARE: FASTSEQ for Windows Version 4.0 ; 0 25.9%; 58.9%; 3est Local Similarity 58.9
Matches 767; Conservative ; ORGANISM: Homo sapiens US-60-453-050-4736 Similarity TCC---SEQ ID NO 4736 TYPE: DNA Query Match Best Local 862 982 647 689 737 197 287 497 347 557 407 617 467 677 587 ŏ

```
NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search
Job tim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ...Lon US/09532315B
...Lon US/09532315B
...Lon US/09532315B
...Locar 1563
...Locar 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1461
                                                                                                                                                                                                                                                                                                                                                                           1341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1695
                                                                                                                                                                                                                                       TCCAACTACTACCGCACTTGGAACGTGGTCCATGACTGGCTGTACAGCTACAGTGTT 1221
                                                                                                                                                                                                                                                                                        1396 rccaactattatagaacciggaatgrggrggrccargacrggcratattacrargcrtac 1455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGTATCTGCTGTAGTACACGAATATGCCTTGGCTTTGCTTGAGCTTTTTCTATCCC 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACTTCATGATGCATGACCAG 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGTCAGCCTGTACTGCCAGGAGTGGTACGCACGGCGGCACTGCCCCTTACCCCAGGCA 1521
                           1042 ATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCTGGCTCAACGCCTTTGCC 1101
                                                         1336 GAGATGTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTCCACGTCATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1222 CAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAGCCATGCTGGGTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1282 CTGGTCTCCGCAGTGGCCCATGAGTATATCTTCTGCTTCGTCCTGGGGGTTCTTCTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1576 GTGCTCTTCGTGCTCTTCATGTTCTTTGGAATGGCTTTCAACTTCATTGTCAATGATAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCACCGGCCCGGCATGGAACGTGCTGATGTGGACCATGCTGTTTCTAGGCCAGGGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Remaining Prior Application data removed - See File Wrapper or PALM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OR FILING DATE: 1994-07-28

OR APPLICATION NUMBER: 08/438,571

OR FILING DATE: 1995-05-10

OR APPLICATION NUMBER: 08/179,873

OR PILING DATE: 1995-07-11

OR APPLICATION NUMBER: 08/504,732

OR FILING DATE: 1995-07-20

OR PILING DATE: 1995-07-20

OR PILING DATE: 1993-10-14
                                                                                                                                 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1402
                           õ
                                                                          g
                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                 ò
                                                                                                                                                                          엄
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
CCATGCTGGGTGTGTTCCTGGTCTCCGCAGTGGCCCATGAGTATGTTCTTCTGCTTCGTCC 1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGGGTTCTTCTATCCCGTCATGCTGATACTCTTCCTTGTCATTGGAGGAATGTTGAACT 1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCTCAACGCCTTTGCCGAGATGCTACGATTTGGAGACAGGATGTTCTACCGGGACTGGT 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAACTCAACGTCCTTCTCCAACTACTACGCCACTTGGAACGTGGTGGTCCATGACTGGC 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTACAGCTACGTGTATCAGGATGGGCTGCGGCTCCTTGGTGCCCGGGCCCGAGGGGTAG 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTTTGCCAACATGAGCCGAGAGCCCTTCAGCACCGTGCCCTGGTGCTCTTATCCTGC 1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGCCACGTTGCCAGGCATCTTCATGCTGCTGCTCATCTTCTTTGCCTTCCTCCATTGCT 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----GTGGCCCATGAGTATATCTTCTGCTCC 362
                                                                                                                                                                                                                                                                                                                                                               905 CCCAGGCCCTGGGATGTGTGCTCTATGCCTGCTTCATCCTGGGCCGCCTCTGTGTTCCTG 964
                                                                                                                                                                                                                                                                                                                                                                                                 1 cccasscccrsssargrsrscrrrarsccrscrrcarccrsssccsccrcrsrsrsrrcrrs 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 508;
                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                   Score 345.2; DB 6;
Pred. No. 2.8e-72;
); Mismatches 18;
                                                                                                                                                     hu01263546
                                                                                                                                                                                                                                 or other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           completed: April 30, 2003, 15:28:10
                                                                                                                               NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID No:
                                                                                                                                                                                                                                                                                                                         .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1385 TCATGATGCATGACCAGCGC 1404
                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGTGCCACTGGAAGGGAGC 442
                                                                                                                                                                                                                                                                                 22.0%;
ilarity 84.8%;
Conservative
                                                                                                                                                                                                                                 ú
ID NOS: 42212
                                                                                                                                                                                                                                 ú
                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                           ) OTHER INFORMATION: a,
US-09-532-315B-1168
                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                           NAME/KEY: unsure
                                                                                                                                                                                                                                                                                     Query Match
Best Local Simi
Matches 424;
                                                                                                                                                                                                             LOCATION: 497
                 SOFTWARE: PER
                                                                           TYPE: DNA
                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
```

ij

(OTARU) ANAJA SIHI